INDIAN RAILWAYS

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GLOSSARY.

Million = 10 lakhs.

Billion or Milliard = one Arab or 100 Crores

Killometre = ·62 miles

Roughly 8 Kilometre = 5 miles.

Ton = 27·2 Maunds.

English ton = 224 lbs.

Metric ton = 1000 Kilogrames, Metric ton is roughly equivelent to ton.

8 ton Kilometre = 5 ton miles approximately.'

£90 a year = Rs. 100 a month nearly.

Dollar = 3·3 Rupees.

Operating or working ratio = $\frac{\text{Expenditure} \times 100}{\text{Income.}}$

Constant or Fixed Charges include Station, Signalling, track, and office expenses and a percentage of capital expenditure and of the use of capital.

Variable or dependent charges include the additional cost of haulage and the depreciation of track and of bridges.

Rates = Transport charges on goods

Fare = Transport charges on passengers.

Amortization = Repayment of the capital debt from revenue by instalment.

INTRODUCTION.

The absence of suitable books on the problems connected with the Indian Railways stands in the way of proper understanding and appreciation of these problems in this country. The lack of interest, evinced by the general public in the affairs of this Asset in which they have invested 800 crores, is partly responsible for the lack of information on the subject. But some responsibility must also rest with the railway authorities and their officials To the latter, comes a great wealth of experience and they constitute a collegium of learning and practice. A good deal, no doubt, has been done to surmount the special difficulties and to solve the problems, but progress would be accelerated if this learning and experience could be placed at the disposal of the country and the Legislature.

The notion amongst railway officials that their problems cannot be understood by laymen, being highly technical, is greatly responsible for the wide gulf which exists today between them and the general public. On the other hand, public opinion is not satisfied with the working of railways, and they do not accord that support to them which, as public carriers, they are entitled to receive The public are ignorant of the difficulties and the special problems which confront the railway officials for the sample reason that these have not been properly stated to them.

Evidence is abundant of the ills resulting from want of intelligent appreciation and mutual co-operation between railway authorities and the travelling public. Many of the ills found today would have been remedied, if instead of confining himself wholly to files, tours of inspection, and general routine duties the railway official had a broader outlook of the entire machinery of railway administration of which he himself is a part.

We are living in a progressive world and there is no aspect of railway problems which does not need further improvement. But its examination should not be confined to a casual report of an official placed on special duty. There should be organized a system under which co-operation between railway authorities and Universities and colleges should be possible. Already there are in the country many Universities that have included in their courses, the study of railway ecnomics, but for want of co-operation between the railway organisation and the Universities, suitable books on railways do not exist. Other opportunities for the study of railway matters are lacking and no useful contribution has so far been made.

The Railway publications, the memoranda written by the Railway Board, and proceedings of Railway Associations and Committees, should be supplied to the Universities free of cost. This is, however, not enough. The establishment of a well equipped central library of railway books is the first step which should be taken by the Government of India. This library should be open to the public, in general, and should be available to the Universities, in particular. A second step should be the establishment of a more intimate relation between railway administrations and the Engineering Colleges. The co-operation of the latter Institutions should be helpful in solving problems of research on railway track, bridges and rolling stock. The only research encouraged by the Railway Board is the research under the standardisation office, whose name is a misnomer. Standardisation, in the present state of diversity of administration, is not an economic problem; it will be achieved automatically when Railways are all brought under one common control and worked as a single unit. The need for research on the Engineering side is as great, if not greater, as that on the economic side and the value of research cannot be judged in terms of rupees, annas, and pies. The creation of an atmosphere of research is the joint responsibility of Railway Administration, Universities and Engineering colleges.

The present volume is offered to emphasize the need for the study of railway problems. It does not claim to give an exhaustive picture of any particular problem, for the detailed study of which a reference to books dealing with the subject is necessary.

A knowledge of the early history of the railways and the gradual evolution of the present system is essential for the correct appreciation of the present administration. The Railways were first constructed in India, as in other countries, by private Companies to whom a fixed rate of interest was guaranteed. In other countries, however, they were gradually amalgamated either voluntarily or through the intervention of the State. In most countries, States have acquired the railways and handed over their administration to statutory bodies. The steps taken in this direction by various countries are described in Chapter II. In Germany the State has acquired all the railways which are now run as one unit and their administration is handed over to a statutory body. In France, a statutory machinery for the management of State Railways and the supervision of Company lines has been created, and a definite date is fixed when the contracts of all the Companies will expire. In England, Companies were amalgamated, under statutory obligations, into four groups and further amalgamation and co-ordination is under contemplation. The scheme of amalgamation

has not yet been worked out in India, nor has the machinery, which will ultimately control all the railways, yet been created.

The Indian Railways are running most economically though at the sacrifice of efficiency. The operating ratio is now the second lowest in the world. A further drop by two and a half points is contemplated in the budget of 1940-41. This low operating ratio has been achieved by retrenchment in staff, and by cutting down salaries to a dangerously low figure.

It is a matter for serious consideration whether economy should not be effected by a change in the policy of administration and finance rather than by cutting down the strength of the staff and reducing their salaries, which in my opinion should be restored to the level that existed before the last period of depression. The Government of India may well follow the practice of other countries and abolish the Depreciation Reserve Fund. They may provide in the budget a sufficient amount for renewals and replacements required during the year. Betterment of existing lines should in every case be met from revenue and not by borrowing.

Indian Railways are already over-capitalised. The burden of loan should not be increased year after year by adding to it the expenditure incurred on the improvement of the existing lines. Renewals and replacements are charged to the Revenue Account in every country. Why should Railways in India not do the same? Fresh borrowing, is justified only in the case of important revenue yielding or expense-saving schemes such as the purchase of lines from companies, the construction of new lines, or the enlarging of the workshops required for the manufacture of rolling stock and locomotives. The Railways have been drawing on an average about 8½ crores every year from the Depreciation Fund. This amount should be taken directly from the revenues. The Railways are now setting aside about 12½ crores in depreciation fund. The amount of 4 crores thus released may be utilised for the improvement of existing lines, restoring the strength of the staff and their salaries to normal scale, and, if possible, for amortisation. An equalisation fund of 50 crores recommended by the Wedgwood Committee should be established.

The problem of Rail-Road competition is not so acute in India as it is in other countries. The possibility of road transport entering into competition with the railways is by no means solely dependent on the difference in transportation charges but is generally based on special facilities which motor vehicles offer. The railways have been complaining of the loss in receipts but incontestable evidence is not

available to show what the extent of the loss is. On the other hand the motor transport directly provides a good share to the railways in freights of the motor vehicles, motor accessories, petrol, lubricating oils and materials for construction and maintenance of roads and generally by developing the country. If the railway earnings are examined, it is not unlikely that, instead of the so-called loss, this increase of traffic may. on the whole, show a profit. The Railways, however, feel injured at the growing competition of the road transport and this is not without reason. A time may come in the near future when the competition may take a turn for the worse, if the railways do not rise to the occasion in providing facilities which other Railway systems have done. The Road transport enjoys certain inherent advantages which are described in Chapter VIII.

There can, however, be organized a system by which uneconomical competition could be replaced by a mutual understanding with regard to the allotment of domains of work and the most probable basis of co-operative working for which there are numerous possibilities. Such procedure will best serve the public which is interested in the existence of both forms of transport in their respective domains.

Detailed discussion of the theory of rates and fares is outside the scope of the present book. The rates and fares cannot be arbitrarily raised, prejudicing the free development of trade in the country. The fundamental principle of transport taxation is to lower the rates to such an extent as to attract maximum traffic and leave a resonable margin of profit. The raising of rates by 12½ per cent over-night without inviting discussion is permissible in the case of traiff duties where premature disclosure may lead to speculation, but it cannot be applied to rates and fares where the danger of speculation does not exist. The raising of freight at the present moment cannot be justified.

No book on Indian Railways can ignore the labour condition. It is a proverb among Railwaymen that people residing between rail wiring are deaf and dumb. Officers have no ears and subordinates have no tongue. It is the duty of the legislature and the Government of India to safeguard their interests. Much has been done in recent years as described in Chapter VIII and their future prospects in the hands of a person who is interested in the welfare of labour as much as in the prosperity of Railways are very safe.

On account of my anxiety to get the book ready by the time of the budget discussions in the Assembly, the proofs were read in great hurry and printing errors could not be eliminated.

I wish to express my indebtedness to many friends from whom I have received much useful criticism, and valuable suggestions.

CHAPTER I.

History and Development of Indian Railways.

Section (1). Early History.

The first proposals for the construction of railways in India were submitted in 1844 to the East India Company in England by Mr. R. M. Stephenson, afterwards Chief Engineer of the East Indian Railways, and others. They included the construction of lines by Railway Companies to be incorporated for the purpose, and the guarantee of a specified return by the East India Company. A contract for the construction by the East Indian Railway Company of an experimental line of 100 miles from Calcutta towards Mirzapore or Raj-mehal at an estimated cost of £1,000,000 was made in 1849 and a return of 5 per cent was guaranteed by the East India Company on the capital. A similar contract was made in the same year with the Great Indian Peninsula Railway Company for a line from Bombay to Kalyan at an estimated cost of £500,000. But no policy of entrusting generally the construction of Indian Railways to the guaranteed Companies was then formulated. Lord Dalhousie in a minute written on the 20th April, 1853, recommended the agency of Companies for constructing and working railway lines under the supervision and control of the Government by its own officers and gave his reasons for preferring this procedure. The policy advocated by Lord Dalhousie was accepted by the East India Company in 1854, and was adhered to by the Secretary of State. Contracts were given to various Companies on guaranteed rate of interest from 5 to 4½ per cent and provision of land free of charge. Half of any surplus profits earned was to be used towards repaying to the Government any sums by which it had been called upon to supplement the net earnings of any previous period in order to make good the guaranteed return; and the remainder was to be distributed to the shareholders.

From the year 1858 till 1900 the Government of India paid £51,527,307 out of general revenues being the amount by which the actual profits fell short of the guaranteed return. The Government, however, recovered £44·7 millions during the next 19 years.

In all those contracts the Government reserved the right of control over the details of construction, rolling stock, rates and fares to be charged, and the standard of maintenance.

The Railways were to be held by the Companies on leases terminating at the end of 99 years, and on such termination the fair value of their rolling stock, plant and machinery was to be paid

to them. But provision was also made to enable the Government to purchase the lines after 25 or 50 years on terms calculated to be the equivalent to the Companies' interest therein, and also to enable the Companies to surrender their lines to the Government and to receive in return their capital at par

In 1862 the Government of India attempted to give contracts to Companies by giving subsidy and not by guaranteeing fixed rate of return. This method however failed, and in 1869 Sir John Lawrence summed up the result of the experiment of the construction of railways by unguaranteed Companies as follows :—

> " The Government of India has for several years been striving to induce capitalists to undertake the construction of railways in India at their own risk, and on their responsibility with a minimum of Government interference. But the attempt has entirely failed, and it has become obvious that no capital can be obtained for such undertakings otherwise than under a guarantee of interest fully equal to that which the Government should have to pay if it borrowed directly on its own account.

There is not much difference between direct borrowing and raising money through Companies with guaranteed interest at market rates. The Government of India definitely adopted the policy of direct construction and owner-ship of railways. Rapid development of railway construction ensued, which necessitated a change in the central organisation.

In 1874 a State Railway Directorate was established and the greater portion of the State Railway establishment and business connected with the State Railway administration was transferred to the control of the Director of State Railways, an officer who functioned on much the same lines as the head of a department under the Government of India. A consulting Engineer was also appointed at the same time and he was associated with the Director but all important matters had still to be referred to the Public Works Department.

Early in 1877 a further change was made in the organisation responsible for the administration and control of State Railways, and in place of the Director of State Railways, three Directors on territorial basis and one Director of State Railways Stores were appointed.

Progress in the Construction of Railways.

By the end of 1879, in about 25 years from the introduction

of railways in India, 6,128 miles of railway had been constructed by Companies which had expended, approximately, £97,872,000. (These figures include the Calcutta and South Eastern and Naihati Railways which were constructed by Companies but were purchased by the Government in 1868 and 1872 respectively). By the same date 2,175 miles of railway had been constructed by the Government at a cost of £23,692,226. An imperceptible defect in the guaranteed system was that during the periods of cheap money in England, over-capitalisation commenced and large capital was sunk in the construetson of unnecessary station buildings, bridges and track.

Introduction of modified guarantee terms.

In 1880 the necessity for great and rapid extention of the railway system was urged by the Famine Commissioners appointed after the great famine of 1878, who estimated that at least, 5,000 miles were still necessary for the protection of the country from famine.

Action in the direction suggested by the Commission was taken by the formation of three Companies without a guarantee. (The Bengal Central in 1881, and the Bengal and North Western, and Rohilkund and Kumaon in 1882) and three new guaranteed Companies (Southern Marhatta in 1882, the Indian Midland in 1885 and the Bengal Nagpur in 1887). The Assam Bengal Railway Company was formed on similar lines in 1892, except that any surplus profits were to be divided between the Secretary of State and the Company in proportion to the capital provided by each. The rate of guarantee in this case was 3½ per cent for the first six years and 3 per cent thereafter.

The terms of guarantee given to the Companies formed since 1880 have thus been much more favourable to the Government than in the case of those formed before 1869. The Government of India attempted various methods of raising funds. The Local Governments and administrations were induced to take a practical interest in the construction and management of railways and in a few cases short extensions were constructed from funds for which the resposibility to pay interest was accepted by Local Governments. Such lines were controlled by the Local Governments concerned under the general supervision of the Government of India. On the administration side further changes were made in 1897. In that year the post of Director General of Railways was abolished and the post of a Secretary to the Government of India in the Public Works Department was created in its place. On account of the expansion of Railway system and the existence of a large number of companies with different terms of contracts and other interests

it was felt that the controlling machinery was not efficient to tackle the complicated problems connected therewith. His Majesty's Secretary of State in Council thereupon appointed Sir Thomas Robertson in October 1901 as Special Commissioner for Indian Railways to enquire into and report on the administration and working of Indian Railways. In his report which became available in 1903, Sir Thomas recommended that the administration of the railways in India should be entrusted to a small Board consisting of a President or Chief Commissioner who should have a thorough practical knowledge of railway working and should be a member of the Viceroy's Council for railway matters, and two other Commissioners who should be men of high railway standing and should have a training similar to that of the President. He recommended that the Board should, in addition to the necessary office establishment, be provided with a Secretary, a Chief Inspector of Railways and a suitable number of Government Inspectors. (For details *vide* Section 3.)

Railway Board.

The Railway Board was established in March 1905 and was provided with :—

A Secretary,

An Examiner of Accounts, and

A Director of Railway constructions.

Within a short time after the constitution of the Railway Board, it was found that the work was being hampered by the Commerce and Industry Department standing between the Railway Board and the Governor-General in Council. The question was referred to a Committee presided over by Sir James Mackay whose report will be discussed in greater detail in Section 4. On the recommendation of the Mackay Committee the constitution of the Railway Board was changed, and enhanced powers were vested in the President. The Board with its staff became collectively the Railway Department distinct from and independent of the Department of Commerce and Industy, though remaining under the administrative charge of the Hon. Member for Commerce and Industries. The President of the Board was given direct access to the Viceroy as if he was a Secretary to the Government of India.

The railway income during and after the War increased abnormally and the Government of India felt that a definite policy should be adopted for the better administration of Railways and they appointed in the year 1920 a Special Committee under

the Chairmanship of Sir William Acworth. Its report is a landmark in the administration of Indian Railways (See Section 5.)

There existed at that time 174 railway undertakings, divided into 14 different categories, eleven of these undertakings being major railways. They were classified under the following five headings.

(*a*) State owned and State managed.

(*b*) State owned and Company managed

(*c*) Company owned and Company managed.

(*d*) Lines belonging to Indian States.

(*e*) Miscellaneous (branch and light feeder lines of various kinds.)

The last category included branches constructed by Local Governments and District Boards.

On the recommendation of the Acworth Committee, three important steps were taken by the Government of India :—

1. The Railway Finance was separated from the general Finance in 1924 (*vide* Section 7.)

2. Three important Railways whose terms expired were taken over by the State, *viz*, the E. I. Railway in 1924 and the G. I. P. in 1925, and the Burma Railway in 1929.

3. The Railway Board was reorganised.

The acquisition of two important systems of railways brought the major portions of broad gauge lines in the country under the direct management of the State. This coupled with the separation of the Railway Finance stressed the need of better control and husbanding of Railway Finances. In 1926 Sir Arthur Dickinson was invited to examine and report on the question of Finance and Accounts (see Section 8). Further the Raven Committee was appointed to look into the condition of workshops and devise methods for their co-ordination. (see Section 9). After the separation of Railway Finance the Railway budget remained in a prosperous condition till 1929, and the Railway administration during this interval, in spite of extravagant expenditure, built a reserve amounting to 18·81 crores. Then the period of depression began in 1930 and Railway receipts which were 103 crores in 1929 fell to 95 crores in 1930 and 86 crores in 1931. The Indian Legislative Assembly appointed a retrenchement committee which met at Simla and examined the proposals of economy. The committee could not examine the working of various railways and its labours were confined to the

examination of the memoranda submitted by the Railway Board. The Government of India, later on, appointed a committee with Mr. Pope as Chairman which introduced the system of job analysis. In the meantime important political changes were being considered at the Round Table Conference in London and the question of railways administration, vis-a-vis the proposed Federation, was referred to a Committee which met in London in 1933. The Committee recommended the establishment of a Federal Authority which will be discussed in greater detail in Section 13. The financial stringency which began in 1930 is still continuing so much so that the railways have not been able to discharge their obligation and pay in full the contribution of one per cent of the capital at charge to the general revenues. During these years of depression it has exhausted its Reserve amounting to 18·81 crores, borrowed 30¼ crores from Depreciation Fund, and kept in abeyance the payment of contribution to general revenues to the extent of 32 crores. The matter was referred to a committee presided over by Sir R. Wedgwood. Some of the recommendations of this Committee have been adopted by the Government of India, while some important financial recomendations are still under consideration. The contracts of B. and N. W. Ry. and of M. S. M. Ry. expired in 1937 but the Government of India extended the period of contract for five years in the case of the former and eight years in the case of the latter in view of the momentous changes outlined in the Government of India Act, 1935 (*vide* Section. 13.)

In the year 1936, the Government of India organised a Department of Communications. The Railway Department ceased to be under the Member in charge of Commerce and it was put under the Member in charge of Communications. The Federal Railway Authority contemplated by the Government of India Act of 1935 was not established on account of political difficulties, and the matter has now had to be postponed indefinitely on account of the War.

SECTION 2.

Terms of Contract of Principal Indian Railways.

There are eleven principal Railway systems of which 4 are owned and managed by the State, and the remaining seven are owned by the State, but they are worked by Companies under different terms of contract.

(*i*) Managed directly by the State.

Names of Railways.	The date on which the State assumed charge of administration.
(*a*) East Indian Railway	1924

(*b*) Great Indian Peninsula Railway ... 1925

(*c*) North Western Railway 1886

(*d*) Eastern Bengal Railway .. . 1884

(*ii*) Owned by the State and managed by Companies

Names of Railways	Date of expiry of contract.
(*e*) Bombay Baroda and Central India-Railway ..	31-12-1941
(*f*) Madras and Southern Marhatta Railway ...	31-12-1945
(*g*) South Indian Railway	,,
(*h*) Bengal Nagpur Railway	31-12-1950
(*i*) Assam Bengal Railway	31-12-1941
(*j*) Bengal and North Western Railway ... (A portion of this railway is owned by the Company.)	31-12-1942
(*k*) Rohilkund and Kumaon Railway ... (A portion of this railway is owned by the Company.)	,,

A summary of the contracts of various Railway Companies is given in the following pages.

(a) East Indian Railway.

The East Indian Railway was worked by the Company till the 1st January 1925 when its administration was taken over by the State. The Oudh and Rohilkund Railway which was acquired by the State from the guaranteed Company on the 1st January 1889, was amalgamated with the East Indian Railway with effect from the 1st July 1925. The total capital at charge of the combined system is 148 crores and the length of the lines comprised in the system is 4407·72 miles.

The first portion of the main line was opened on the 15th August 1854 from Howrah to Hoogly and the last portion from Chola to Delhi was opened to traffic on the 1st August 1864.

The first contract for its construction was given to the East Indian Railway Company in 1849 and a return of 5 per cent interest on capital was guaranteed. The contract was for a period of 30 years and it expired in 1879, when the entire railway was purchased by the State. The purchase price was £32,750,000 and it was provided that this should be paid in the form of a terminable annuity of the amount of £1,473,750 payable from the 1st January 1880 to the

14th February 1953. One-fifth of the annuity was deferred and the holders of this portion (representing a capital sum of £6,550,000) constituted the new East Indian Railway Company. A new contract was signed between this Company and the Secretary of State in 1879 for the working of the Railway. A number of branch lines belonging to the State and Companies were incorporated in the undertaking on various dates.

The main provisions of the contract were :—

(1) Land shall be provided by the Government at the cost of capital. (2) Guarantee of interest at 4 per cent per annum on £6,550,000, the capital sum representing the deferred portion (one-fifth) of annuity payable by the Government for the purchase of the East Indian Railway. (3) Guarantee of principal and interest in respect of debentures and debenture stock issued by the Company, and (4) commencing from the 1st January 1920, a compensation to deferred annuitants for inability to obtain exemption from income-tax.

Distribution of Profits.—Up to the 31st December 1919, the surplus profits in each half-year remaining after payment of interest and annuity charges, and the contribution to the Provident Fund, were divided as follows :—

Of the first Rs. 25,00,000 of such surplus profits (or of the whole amount when it does not exceed Rs. 25,00,000) the Government to receive four-fifths and the Company one-fifth ; of any excess beyond Rs. 25,00,000 the Government to receive fourteen-fifteenths and the Company one-fifteenth.

The share of the Company in such surplus to be remitted to England through the Government of India at Rs. 12 to the pound sterling.

By the contract of the 17th December 1919 the Government and the Company mutually agreed that subject to the provisions contained in that contract, the principal contract, dated the 22nd December 1879 shall continue in force until the 31st December 1924 when the same shall determine. On the determination of the contract, the portion of the annuity that had been deferred would become payable for the period remaining up to the 14th February 1953.

On the recommendation of the Acworth Committee, the Secretary of State undertook direct administration of the Railway on the 1st January 1925. The Delhi-Ambala-Kalka section was constructed by the Delhi-Ambala-Kalka Railway Company and the

first contract was signed on the 12th February 1889. The contract expired on the 21st December 1926 and the State purchased the line. From the year 1926-27 it was amalgamated with the North Western Railway.

(b) Great Indian Peninsula Railway.

The Great Indian Peninsula Railway comprises the line formerly owned by the old Guaranteed Company of that name, in amalgamation with that of the late Indian Midland Railway Company.

The property owned by the old guaranteed Great Indian Peninsula Railway Company was purchased by the State in 1900 and the contract between the Secretary of State and the Indian Midland Company, dated the 22nd October 1885, was determined. The amalgamated lines formed part of Great Indian Peninsula Railway undertaking which was worked by the reconstituted Great Indian Peninsula Railway Company up to 30th June 1925, when all the contracts then subsisting between the Secretary of State and the Company were determined and the line was brought under State management with effect from 1st July 1925.

The working capital of the amalgamated line is 118 crores and covers a mileage of 3,727 16 miles of which 3482·8 miles is broad gauge and the rest small guage 2'-6".

The contract was first given by the East India Company in 1849 and the Company opened the first portion from Victoria to Thana a distance of 21 miles on the 18th April 1853. The main provisions of the contract were :—

(*i*) *Land.*—originally, *i. e.*, up to the 30th June 1900, was provided by the Government free of cost to the Company, while that acquired thereafter was provided by the Government to the Company at the cost of capital.

(*ii*) *Government aid.*—Guarantee of interest at 3 per cent on the new capital of the Company.

(*iii*) *Distribution of profits*—The working expenses of the whole undertaking were divided half-yearly between, and attributed to, the systems in the proportion of the gross receipts each (the branch lines in Berar being treated as part of the Great Indian Peninsula Railway system.)

The Government purchased the Railway in 1900 and entered into a new contract with the Great Indian Peninsula Railway

Company for a period of 25 years. The Midland Railway between Bhopal and Agra was also given to this Company for a period of 25 years. The net earnings of each year were applied:—

(*a*) to the payment to the Secretary of State of the sum of Rs. 2,00,00,000.

(*b*) to the re-payment to the Secretary of State in rupees of all interest payable in respect of such year on all money raised after the 30th June 1900 by the Company with the sanction of the Secretary of State for the purpose of the undertaking otherwise than by the issue of shares or capital stock, or provided by the Secretary of State after the same date.

Any surplus to be divided between the Government and the Company in the proportion of 19/20ths to the former and 1/20th to the latter. If the Company with the sanction of the Secretary of State increased its new capital and issued further shares or stock as fully paid up, the Company's share in such surplus as aforesaid should thenceforth be increased by an additional fractional share bearing the same proportion to the original fractional share of 1/20th as the additional capital of the Company shall bear to the authorised capital of £2,575,000, but so that the fractional share should on no account exceed 1/10th.

The conditions about rates and fares and special obligations as to the conveyance of mails, troops, etc., were the same as in the case of other railways.

(c) North Western Railway.

This line was first constructed by the old Sindh, Punjab and Delhi Guaranteed Railway Company which was registered in 1855. The first portion was opened to traffic from Kotri to Karachi City in 1861. The Railway was purchased by the State in 1886 and was amalgamated with the Punjab Northern, the Indus Valley, the Eastern Section Sind-Sagar, and the Southern section Sind-Pishin State Railways to be worked as one under-taking under the name of the North Western Railway ; the administration of the railway was not given to any Company after its purchase, but the State administrated it directly.

When the State assumed charge of the East Indian Railway the Delhi Ghaziabad and Delhi-Ambala-Kalka Sections of this railway were handed over to the North Western Railway.

The capital of the Railway is 146·14 crores of which 33·79 crores were spent on strategic lines. The length of the line under the system is 7088·28 miles.

Other branch lines were amalgamated with the North Western Railway at different times.

The Southern Punjab Railway was inagurated in 1895 and the main provisions of the contracts were : the land in British Territory was provided by the Government free of cost to the Company. As to that in the territories of any Indian State, the Government undertook to use their influence to acquire it for the Company, as far as possible on the same terms.

The Terms of Working : For management, maintenance, use of rolling stock and working, the Government retained 52 percent of the gross earnings, the remainder being the net earnings of the Company. Such net earnings, together with the rebate constituted the Company's net receipts. Surplus net receipts in excess of 3¼ per cent per annum of the total expenditure of the Company in sterling were divisible equally at the close of each year between the Secretary of State and the Company, provided that, before determining such surplus net receipts for division, a yearly sum of £5,000, might be charged by the Company against the net receipts for administrative expenses in England and India.

The contract provisions about rates and fares and about special obligations were the same as in other Companies.

Government could by giving twelve months' previous notice of purchase, determine the contract on the 31st December of 1929, or on the 31st December 1934 or on the 31st December of the last year of any subsequent period of ten years except the period expiring on the 31st December, 1954 by paying to the Company in sterling a sum equal to 25 times the yearly average of the Company's share of the net earnings of the railway during the five years immediately preceding the date of determination, provided that such sum not to exceed by more than 20 per cent of the total capital expenditure of the Company in sterling, not be less than such capital expenditure.

The State purchased the line and amalgamated it with the North Western Railway in 1929-30.

(d) Eastern Bengal Railway.

The Eastern Bengal Railway Company was a guaranteed Company and it was registered in 1857. The first line was opened from Calcutta to Raneghat on the 29th September 1862. It was acquired by the State on the 1st July 1884 and the Northern Bengal State and the Calcutta and South Eastern Railway were amalgamated with it for working by the State as one undertaking under the name of the Eastern Bengal Railway.

The length of the line is 2,009·55 miles of which 900·53 miles are broad gauge, 1,072·13 miles metre gauge and the gauge of the remaining 36·89 miles is 2'-6". The capital at charge is 52·76 crores. The line is owned and worked by the State.

There are a number of small lines which are worked by the Eastern Bengal Railway, the terms of contract of which are approximately the same. Cooch Behar State Railway is mentioned by way of illustration. The agreement between the Secretary of State and H. H. The Maharaja of Cooch Behar was entered into on the 25th February 1907 about the management, maintenance and working of the line. The Railway is the property of the Cooch Bihar Durbar.

Distribution of Profits—For management, maintenances and working, the Eastern Bengal Railway retains 40 per cent of the gross earnings provided that when the stock of the Eastern Bengal Railway is used for the conveyance of any traffic on the Cooch Behar State Railway, the Eastern Bengal railway retains up to, but not more than 45 per cent of the gross earnings obtained by the use of such stock. The remainder, being the net earnings of the Branch, is paid over to the Durbar. The agreement is terminable at six months notice from either side.

(e) Bombay Baroda and Central India Railway.

The Company was registered in 1885 and the first portion was opened to traffic in 1860 between Ankleswar and Nerbudda. The property vested in the former Bombay, Baroda and Central India Guaranteed Railway Company was purchased by the Secretary of State on the 31st December, 1905 from which date all the contracts then subsisting between the Secretary of State and that Company were determined, the Company was re-constituted, and a new contract was signed on the 8th April 1907. The new Company was to work all the subsidiary lines including the Rajputana Malwa Railway. The purchase price was fixed at the sum of £11,685,581 and the Secretary of State agreed to create and issue to the Company on the 31st December, 1905, India 3 per cent stock to the amount of £10,089,146 in satisfaction of £9,685,581, as part of the purchase price, the Company raising new stock capital of £2,000,000 being unpaid balance of the purchase money of £11,685,581.

In addition to the main line the Company works certain other lines owned by separate Companies and Indian States, one of which *viz.*, the Ahmadabad-Dholka Railway, has been purchased by the Government and merged in the metre gauge section of the Company's line with effect from the 1st July 1922.

The length of the line is 3,511·50 miles of which 1259·58 is broad gauge, 2,027 is metre gauge and the rest is small gauge of 2'-6". The capital at charge of the Railway is 77 crores spent on the Patri Branch.

The main provisions of the contract are :—

(*i*) *Land.*—Land was provided by the Government free of cost to the former Company. After the 31st December 1905, the cost of the land provided by the Government is debited to the appropriate capital account.

(*ii*) *Government Aid.*—The Government guaranteed to pay to the Company interest at the rate of 3 per cent per annum on its stock capital of £2,000,000, raised in satisfaction of the unpaid balance of the purchase money of £11,683,581, as also on the amount paid to the credit of the Secretary of State in respect of any further ordinary stock which the Company may issue with his sanction.

Capital required for the purposes of the undertaking after the 31st December, 1911 shall, at the option of the Secretary of State, either be advanced by him or, be provided by the Company by the issue, as the Secretary of state shall decide, of further ordinary stock or of debentures or debenture stock.

Power of the Government to determine the contract.—The contract may be determined by the Government on the 31st December of any succeeding fifth year, by giving to the Company in England, 12 calendar months, previous notice.

Distribution of Profits.—From the half-yearly gross earnings of the undertaking are deducted the working expenses of the undertaking and all other charges to Revenue account properly attributable to each half year, the remainder, together with the interest to be credited by the Secretary of State in respect of any balance of unexpended capital in his hands under clause 19 of the contract of 24th October, 1913, being the net receipts. Under the contract of the 5th October, 1933, Rupees ten crores of the preferred capital of the Secretary of State were converted into capital bearing fixed interest at 4½ per cent.

The Company has the working charge of 16 smaller undertakings including the Nagda Ujjain Railway which is the property of the Gwalior Durbar, and is managed, maintained and worked by the B. B. & C. I. Railway as part of the Company's system.

Rajputana Malwa Railway. (3'.3⅜ guage)

The Maharaja Holkar lent to the British Government one hundred lakhs of Rupees at 4½ per cent per annum for the construction of the Khandwa-Indore section, and is entitled to a moiety of surplus profits.

The Maharaja Scindia of Gwalior lent to the British Government seventy-five lakhs of rupees at 4 per cent per annum for the construction of the Indore-Neemuch section and the branch to Ujjain.

The Cawnpore-Achnera line was leased to the Bombay, Baroda and Central India Railway Company on the 1st October 1886 and is now treated as an integral part of the Rajputana-Malwa Railway.

The Rajputana-Malwa railway system has been worked by the Bombay, Baroda and Central India Railway Company since the 1st July, 1885.

The Rajputana section was sanctioned in 1870 and was opened in 1881 ; the Malwa section was sanctioned in 1872 and opened in 1881 ; the Cawnpore-Achnera section was sanctioned in 1874 and opened in 1884 ; and the Rewari-Fazilka section was sanctioned in 1881 and opened in 1885.

(F) Madras and Southern Marhatta Railway.

The Madras Railway Guaranteed Company was first registered in 1853 and the first line between Vayasarpandy and Walejah Road (Arcot) was opened on the 1st July 1856. According to the original contract the Government of India guaranteed inserest in sterling at 5 per cent. Land was provided free of cost. According to the original contract, in ninety-nine years from the 1st April 1857 the line would revert to Government on paying for the rolling-stock at its fair value, the Company having the right to surrender the contract previously by giving notice. Government might within six months after the expiration of 25 or 50 years of the term, determine the contract by purchase at the mean market value of the shares during the three preceding years.* The contract expired on the 31st December 1907, the lines owned by that Company were purchased by the Secretary of State for India, and on the 1st January 1909 the then existing Madras Railway (with the exception of the Jalarpet Mangalore section) together with the 3'-⅜" gauge section of the South Indian Railway from Katpadi to Gudur and

*Footnote Railway Administration Report 1907.

Pakla to Dharmavaram, was made over to the Southern Marhatta Railway Company for working, the enlarged Company being styled the Madras and Southern Marhatta Railway Company.

In addition to the lines now comprised in the system, the Company, up to the 30th September 1919, worked the lines, Birur to Shimoga, Mysore to Nanjangud and Mysore to Bangalore all of which were made over to the Mysore Durbar on the 1st October 1919.

The mileage of the line is 3,228·53 of which 1,146·48 is broad gauge and the rest is metre gauge. The total capital at charge is 77 crores. It includes 12 subsidiary Companies.

The main provisions of the new contract were :—

Land to be provided by the Government at the cost of capital.

Government Aid. (*a*) Interest in sterling is guaranteed at 3½ per cent per annum on the nominal amount of capital stock, for the time being, of the Company, and is payable half-yearly by the Secretary of State, the Government being entitled to retain out of the Company's share of surplus profits for the year the rupee-equivalent of this interest. If the Company's share for the year be less than the guaranteed interest, the deficiency is not to be made good out of the Company's share of a subsequent year.

(*b*) Moneys for capital expenditure are provided at the Secretary of State's option, either by advances made by him or by the issue of debentures or debenture stock or further capital stock of the Company such issues can only be made with the Secretary of State's approval.

Distribution of Profits. After deducting from the gross earnings of the line for the half year, the working expenses (which include the contributions made under the rules to the Provident Fund and the haulage payable to the South Indian Railway) the net earnings are applied

(*a*) In payment of rebate to the South Indian Railway :

(*b*) In repayment to the Secretary of State of the interest paid on debentures. But the undertaking is to be credited half-yearly with a sum equal to the guaranteed interest paid on the average amount, if any, held by the Secretary of State during the half-year, of the unexpended balances of issues of capital made for the purposes of the undertak-

ing ; and (c) the surplus was divided between the Secretary of State and the Company in proportion to the respective shares in which the capital, for the time being (excluding debenture capital), has been contributed by them. The Secretary of State's capital is taken at a sum of £11¼ millions, to which is added the amount up to date of his advances ; and the Company's capital at £5 millions.

Power of the Government to determine contract —The Railway and all its appurtenances are absolutely the property of the Government, which might determine the contract on the 31st December 1937 or on the 31st December in any succeeding fifth year reckoning from that date, by giving to the Company in London not less than twelve months' previous notice. Upon the termination of the contract the Company is to give the Government the possession of the railway ; and the Government are to pay the Company a sum equal to the nominal amount of its share, *viz.*, £5,000,000 and of any additional paid up capital stock that may have been issued for the purpose of the Company's and State lines.

The Government had the option to take over the administration on the 31st December 1937 but the Government did not avail itself of the termination of contract and they extended the period for 8 years. According to the new contract the Railway and all its appurtenances are absolutely the property of the Government which may determine the contract on the 31st December 1945 or on the 31st December of any succeeding fifth year. According to new contract the Company is entitled to 1/10th of the profits up to Rs. 75 lakhs, 1/15th of the next fifteen lakhs and 1/30th of the profits above Rs. 90 lakhs.

(g) South Indian Railway.

The line now called the South Indian Railway was formerly owned and worked by the Great Indian and Karnatic Railway Companies. The first portion was opend to traffic on the 1st February, 1861 between Tirupatter and Salem. These two lines were amalgamated on the 1st July 1874, under the title of the South Indian Railway which on the 1st January 1891, was purchased by the State and handed over, together with the Villupuram-Guntakal State Railway, for working as one undertaking, to a new Company the existing South Indian Railway Company. The portion of the railway from Dharmavaram to Guntakal was made over to the former Southern Marhatta Railway in 1893.

With effect from the 1st January 1908 the Jalarpet Mangalore Section of the former Madras including the Tiruppatur-Krishnagiri,

Morappur-Dharmapuri and the Nilgiri railways was incorporated in the undertaking of the South Indian Railway Company who, from the same date, relinquished and made over to the amalgamated Madras and Southern Mahratta Railway Company the 3'-3" 3/8 gauge lines from Katpadi to Dharmavarm and from Pakla to Gudur, and obtained running powers over the Madras-Bangalore section of the Madras and Southern Mahratta Railway The Shoranur-Cochin Indian State line was, on the same date, also transferred from the former Madras Railway Company to the South Indian Railway Company for working.

The South Indian Railway now comprises 16 other smaller lines.

The line is owned by the State and is worked by the South Indian Railway Company which was registered in 1891. The total capital at charge is 48·08 crores and its mileage is 2531·95 of which 664·15 is broad gauge and 98·69 small gauge (2'-6") while the rest is metre gauge.

The main provisions of contract which was registered on the 24th November 1890 are :—

(*i*) *Land* —Land is provided by the Government at the cost of capital.

(*ii*) *Government Aid.*—Guarantee of 3½ per cent in sterling on the Company's share capital of £1,00,000, and on any paid-up stock or share (other than preference) capital thereafter issued by the Company with the sanction of the Government (not including premia paid thereon).

(*iii*) *Distribution of profits* —Under section 60 of the principal contract of the 24th November, 1890 as amended by section 25 of the supplemental contract of the 1st December 1910, the net revenue receipts of each half-year are applied, in the following manner and order. In payment to the Government .—

(*a*) of interest at the rate of 3½ per cent per annum for such half-year, paid by the Government under section 41 of the principal contract.

(*b*) of the amount paid by the Government in respect of interest for such half-year, upon the sum of £425,000 irredeemable debenture stock of the Company; upon the debentures for £375,000 and £56,500 respectively issued for the purposes of the Pamban Branch ; and upon any debenture

stock or debentures or preference stock of shares issued by the Company after the 31st December, 1910.

(*c*) of interest for such half-year at the rate of 3½ per cent. per annum on the amount of the Government capital as shown in the Government capital account for the division of such receipts; and

(*d*) the residue, if any, is divisible between the Government and the Company in the ratio of the average amount of capital contributed by each party.

The period of contract was 55 years and it terminates on the 31st December 1945. This line includes a Tanjore District Board Railway which was constructed from funds provided by the Government of Madras and the District Board of Tanjore.

It appeared from a recent debate in the Central Legislative Assembly that the intention is to amalgamate the S. I. and M. & S. M. Railways in 1945.

(h) Bengal Nagpur Railway.

The construction of the first portion of the main line from Asonsol and Nagpur was sanctioned in 1884. The first contract with the Bengal Nagpur Railway Company was signed on the 9th March 1887. The Company took over the Nagpur-Chattisgarh State Railway and constructed other lines, embracing in all a system of railways known as the Bengal-Nagpur Railway.

Its capital at charge is 78·34 crores and its mileage is 3392·25 of which 2465·91 are broad gauge and the rest is small gauge of 2'-6'. There is no metre gauge in Bengal Nagpur Railway.

The main provisions of the contract are :—

Land.—provided by the Government at the cost of capital.

Government aid.—Guarantee of interest at 4 per cent per annum in sterling on the Company's ordinary capital of £3,000,000 up to the 31st December 1913; thereafter, on this ordinary capital and on any further ordinary capital that may be required, the guarantee to be 3½ per cent.

Up to 31st December, 1913 profits were divided in the ratio of ¾ths to the Government and ¼th to the Company, if the ordinary capital of £3,000,000 was not increased before that date. If the said capital was increased, the Company's share of surplus profits

was to be increased by the fraction which bore to one fourth the same proportion as the additional capital bears to the existing capital of £3,000,000.

With effect from the 1st January, 1914, the net earnings attributable to the two half-years of a financial year, less

(*a*) interest (not charged to capital under the provisions of the contract of the 22nd February 1910) on debentures or debenture stock of the Company,

(*b*) guaranteed interest on Company's open line capital, and

(*c*) interest at 3½ per cent on the Secretary of State's open line capital divided between the Secretary of State and the Company in the ratio of the average amounts during the year of the Secretary of State's open line capital and the Company's open line capital, in accordance with the contract of the 5th November 1912.

Power of the Government to Determine Contract.

The Railway and its appurtenances are declared to be absolutely the property of the Government which may determine the contract by giving twelve months' previous notice on the 31st December, 1950 or on the 31st December of any succeeding fifth year.

On the termination of the contract the Company is to hand over to the Government the Railway and all its belongings of every description, and the Government are to repay the amount at par of the share capital which has been paid in by the Company.

(i) Assam Bengal Railway.

The construction of the Assam Bengal Railway as a State line was sanctioned in May 1891. The Assam Bengal Railway Company was formed in England in April 1892 and took over the works commenced by the State. The late Noakhali Railway which was worked by the Assam Begal Railway Company up to the end of 1905 was purchased by the Government and amalgamated with the Assam Bengal Railway from the 1st January, 1906.

The capital at charge of the Railway is 25·63 crores and the mileage is 1,306·41, all metre gauge.

Principal terms of contracts are :—

(1) Land was provided by the Government free of cost.

(2) Government guaranteed interest in sterling at 3 per cent on the Company's share capital of £1½ million sterling.

(3) The Railway and its appurtenances were to be absolutely the property of the Government who might determine the contract on the 31st December, 1921 or at the end of every succeeding tenth year by giving 12 months' previous notice. (This power was not exercised in 1921 nor in 1931.)

The Assam Bengal Railway system includes 4 different worked lines. I mention only one by way of illustration, namely, Mymensingh, Bhairat Bazar Railway, which was constructed by the Company registered in 1915. Land was provided by the Government free of cost. The Government had a right to terminate the contract on the 31st August, 1948 or at the end of any subsequent period of 10 years. The Government could also give notice of special purchase if they thought that the gauge of the line should be altered. In this case the Government were to pay 25 times the average net earnings or 115 per cent of the capital whichever might be greater.

(j) Bengal and North-Western Railway.

The Bengal and North-Western Railway system is made up of :—

(*a*) The Bengal and North-Western Railway and

(*b*) The Tirhoot Railway.

The Company was registered in October 1882 and the first line was opened for traffic in 1884 from Mankapur to Gonda.

The capital at charge is 22·30 crores. The total mileage is 2107·9 miles, all metre gauge.

The main provisions of the contract are :—

Land—Land was provided by the Government free of cost for the Company's railway and at the cost of capital for the Tirhoot Railway undertaking.

Terms of working—The Company's railway and the Tirhoot Railway undertaking are worked conjointly; but the accounts of each are kept separate and distinct, except those relating to working

expenses other than maintenance of structural works The working expenses of the open system exclusive of the charges for maintenance of way, works and stations are divided between the Company's Railway and the Tirhoot Railway in proportion to the respective gross earnings,

Distributions of profits.—As to the Company's Railways, under the original contract of 1882 any surplus over 6 per cent was to be equally divided between the Government and the Company, but this provision was rescinded by the contract of the 22nd February 1886. which leaves the profits entirely in the hands of the Company.

As to the open system, after deducting half-yearly from the gross earnings of the Company's Railway and of the Tirhoot Railway and other extensions, the working expenses, the balance of the gross earnings (termed net revenue) in the case of the Company's line belongs to the Company and in the case of the Tirhoot Railway undertaking is applied in the following manner and order :—

(*a*) In payment to the Company of interest accruing in each half-year, after the expiration of the period during which interest is chargeable to capital, at 4 per cent. per annum on one-half of the capital raised and expended by the Company for the purposes of the railway crossing the Gundak river by a bridge from Bagaha to Chitauni, including interest paid out of capital during construction.

(*b*) In payment to the Government from the aggregate net revenue for the entire year of interest accruing in such year at 5 per cent. per annum on all money advanced or expended by the Government for the purposes of the open lines of the undertaking which have not been repaid to the Government.

(*c*) The residue if not in excess of 10 lakhs was to go to the Government and the Company in the proportion of 9/10ths to the former and 1/10th to the latter ; if in excess of 10 lakhs, then as to the 10 lakhs in the aforesaid proportion, and as to the balance in the proportion of 29/30ths to the Goverment and 1/30th to the Company.

Power of the Government to determine the contracts relating to the Company's railway :—

The line and all its appurtenances become the property of the government on the termination of the contracts. If the con-

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Note :—The rate of interest is 6 per cent on outlay from 1st September 1922 and 5½ per cent on outlay from 1st October 1922 as approved by the Secretary of State for India.

tracts terminate by the efflux of time, the Government is to pay to the Company the value of rolling stock, movable machinery and stores. The Government may, however, determine the contract on the 31st December 1937 or 31st December 1942 on giving to the Company 12 calendar months' previous notice in writing. If this option is exercised in either of the years 1937 and 1942, the price payable is to be (*a*) the equivalent in sterling of Rs. 10,17,08,000 (at 1s. 6d. per rupee); (*b*) the actual sterling capital expended by the Company on the Doab lines; (*c*) the sterling capital advanced by the Company for expenditure on the Company's Railway other than the Doab lines in excess of the sum £433,333 between 1912 and the end of the year 1937 or 1942, as the case may be.

Power of the Government to determine the contract relating to the Tirhoot railway undertaking :—

If the original contract with the Company dated the 12th December 1882, terminates for any reason prior to the expiry of the term of the contracts relating to the Tirhoot railway undertaking, then the latter also *ipso facto* terminates at the same time. The Tirhoot railway contract shall continue in force till the 31st December 1937 or 1942 as the case may be. But if option is not exercised in 1942, the Company shall have no power to continue the working on the Tirhoor State Railway after the end of 1942, unless a further agreement thereto is made. On the determination of the contract, the Government will resume possession of the undertaking and any capital sums which may have been raised by the Government on the undertaking are to be considered as debts due from the Company and the Government respectively.

(k) Rohilkund and Kumaon Railway System.

The Rohilkund and Kumaon Railway Company was registered on the 6th October 1882 and the first agreement with the Secretary of State was made on the 12th October 1882.

The capital of the Railway is 4.64 crores and the mileage is 570·78 miles, all metre gauge.

Land was provided by the Government free of cost subject to the condition that the Company will pay the price on demand.

The Government guaranteed interest at 4 per cent on sterling capital up to £200,000 expended by the Company till the 1st January 1885, thereafter a subsidy of Rs. 20,000 half-yearly for 10 years, which ceased on the 31st December 1894.

In the case of the Lucknow Bareilly Railway, the Government guaranteed the principal and interest for a nominal amount of £1,47,000. This amount was paid by the Secretary of State in England between 1911 and 1918. It is now the property of the Government and is worked by R. K. Railway.

According to the contract of 1932 the Secretary of State shall have the option of purchasing the Company's railway on the 31st December '1937 or the 31st December 1942 on giving to the Company 12 months' previous notice in writing.

If the option to purchase the Company's railway in either of the years 1937 or 1942 is exercised, the price payable is to be :—

In respect of the Company's original line the equivalent in sterling of the sum of 64 lakhs. In respect of the extensions a sum equal to the twenty-five times the average yearly net earnings of the lines during the five years ending on the 31st December 1932.

The Rohilkund and Kumaon Railway including Lucknow-Bareilly section is now practically worked by the B. & N. W. Railway. The Directors of the Companies are different but the administration is common.

1) H. E. H. The Nizam's State Railway.

Up to the end of 1878 the line was worked by the Great Indian Peninsula Railway Company with its own rolling stock. From January 1879 to the 31st December 1884 it was worked by the State Railway agency and from January 1885 by the Nizam's Guaranteed State Railways Company. It was taken under direct State management in 1931.

The capital at charge of the Company is 14·86 crores and its mileage is 1347·87, of which 688.11 is broad gauge and the rest is metre gauge. A new line of 12·04 miles in length is under construction.

The main provisions of the contract and agreement were :—

Land.—Provided by the Government free of cost to the Company.

Government aid.—Guarantee of interest in sterling at 5 per cent. per annum on the Company's share (£2,500,000) and debenture (£1,500,000) capital for 20 years from the date on which such capital is paid up. The guarantee in the case of the share capital ceased on the 25th January 1904 but the guarantee in respect

of the debenture capital ceased on various dates ranging from the 30th June 1904 to the 31st January 1928. The Government has authorised a further debenture called 'The Third Debenture' amounting in all to £1,500,000 without any guarantee. Up to date the Government has purchased £960,400 of the debentures.

Distribution of profits—During the period of the guarantee the repayment of the guaranteed interest for each half-year and thereafter interest for each year at the rate of 5 per cent on the share and debenture capital is to be the first charge against the net earnings of such half-year or full year. Of any residue, either before or after the cessation of the guarantee, one-half is to be applied in payment of the guaranteed interest not previously recouped and any other sums owing by the Company to the Government, and the other half is to be retained by the Company. When the Government has re-imbursed all sums paid under the guarantee together with simple interest thereon at 5 per cent per annum, the company is to be entitled to the whole of the net earnings.

Power of the Government to determine the agreement.—In the event of any breach by the Company of any of the provisions of the agreement, the Government may give the Company in London six months' notice of its intention to determine the agreement; and unless the breach shall be remedied within 6 months, the Government may determine the agreement and assume possession of the railway, paying to the Company in sterling so much of the capital as shall be unredeemed.

The Government may also terminate the agreement and purchase the railway, rolling stock, etc., on the 1st January 1934 or 1st January 1954 by giving 12 months' notice. If the railway is thus acquired, the Government is to pay to the Company in sterling the amount of the unredeemed capital *plus* a bonus of 25 per cent.

At the end of the full terms of 99 years, if the agreement continues so long, the land in the possession of the Company with the railway, buildings, works, and fixed machinery, will revert to the Government free from all debts and charges but the rolling stock, plant, movable machinery and stores must be purchased by the Government at their fair value.

The agreements between the Nizam's Government and the Company for working of all the sections both broad and metre gauge were determined prematurely on the 1st April 1931 from which date the railways were brought under the management of the Hyderabad State.

The Bezwada extension (21·47 miles) was constructed for the Government of India by H. E. H. The Nizam's Guaranteed State Railway Company. After the acquisition of the Company in 1930 this line is now worked by the Hyderabad State as part of its broad gauge system. The contract is terminable on the 31st March any year subject to six months' notice.

The working of Dronachellam extension (36·28 miles) was transferred on the 1st October 1928. Consequently on the acquisition of the Company in 1930, this line, although belonging to the Government of India, is now worked by the Hyderabad State Railway. The agreement is to remain in force for a period of 5 years and subsequent to this date the agreement may be terminated on the 31st March of any year subject to 12 months' notice.

Personal Note.

It is desirable to follow the example of France and terminate contracts of all Railways on the same date. The various systems may then be amalgamated and all the Indian Railways and the ports may be managed as a single unit.

SECTION 3.

Robertson's Report (1901).

During half a century 25,936 miles of railways were constructed and were opened to traffic in India, which were worked by 33 separate Railway administrations as follows :—

24 by Companies operating a total of 17,754 miles.

5 by Indian States ,, ,, 2,184 ,,

4 by the Government ,, ,, 5,998 ,,

These Companies enjoyed varying privileges. The administration was carried on by the Railway Branch of the P. W. D. which was presided over by a civilian who was a member of the Viceroy's Executive Council who had under him a consulting Engineer, an Examiner of accounts, a Secretary and Deputy and Assistant Secretaries. The Company Railways were all worked by a Board of Directors in England representing the shareholders with a Government Director appointed by the Secretary of State for India to represent the Government, and an officer called the Agent who represents the Company in India.

The administrative machinery was found to be ineffective to control the Railways and to meet their future expansion. The Secretary of State for India in Council consequently appointed Mr. Thomas Robertson on the 22nd August 1901 to enquire into the affairs of the Indian Railways[1]. The Committee consisted of a single individual which, according to Lord Palmerston, is the most efficient Committee. The most efficient Committee according to Lord Palmerston is a Committee of three persons provided two absent themselves.

The terms of reference were :—

(1) To enquire into and report on the administration and working of Indian Railways, whether controlled by the State or by Companies with special reference to the system under which they would be managed in India in the future.

(2) To report upon the feasibility of a systematic plan of railway development in India to be worked up by the Government over a series of years.

(3) To advise as to the management and development of the traffic, the convenience of the public and the improvement of the revenue, and

(4) Generally to make such suggestions as may be useful for any or all of these purposes, including the extension of branches and light railways as feeders of the main lines.

With reference to the first item of the terms of reference, Mr. Robertson recommended that the administration of Indian railways should be entrusted to a small Board which should consist of :—

A President or a Chief Commissioner who should have a thoroughly practical knowledge of railway working and who should be a Member of the Viceroy's Council for railway matters, and two other Commissioners who should be men of high railway standing and should have a similar training to that of the President. The Board should have a Secretary, a Chief Inspector of Railways and Government auditors.

Mr. Robertson examined the question of Company *versus* State management and he was emphatically opposed to the dual system. He said :—

" It would seem clear, therefore, that the two systems should not both be in operation in India and that the Government should

(1) Mr. Robertson wrote a few pages report which was subsequently expanded by Mr Huddleston and published as Robertson's report.

either work all the railways as State railways or lease them all to companies to work. The latter, I consider, would on the whole be the best course for India."

Mr. Robertson could not suggest any satisfactory method for raising funds for future development. No company could raise capital without State guaranteeing a minimum rate of interest which is not absolutely different from direct contribution by the State.

As regards traffic, Mr. Robertson pointed out that the average speed in India was much less and the passengers carried per train are much more than in any other country. The average speed of the fastest train between Calcutta and Bombay was 31·25 miles while in America the average speeds of fast trains vary from 50 to 55 miles per hour and of ordinary trains from 30 to 35 miles per hour. Mr. Robertson advocated that Railway Companies should provide better accommodation for third class passengers who are their best customers In fact, it would almost seem that the railways in India were insufficiently appreciative of the value of their third class passenger traffic. The less paying first and second class passenger traffic appears to receive all the attention whereas the traffic which really needs to be fostered is that represented by third class passengers, who are the backbone of the passenger business of every railway in India; their numbers in 1901, excluding season ticket holders, amounted to nearly 170½ millions against 9½ millions of all the other classes put together. As regards booking offices he said :—

"All booking offices should be opened sufficiently early to admit of the passengers obtaining their tickets without crowding or difficulty, and in good time for the train by which they intend to travel. This may appear a small matter to the station officials but to the travelling public it is one of importance. The rules of course require that this should be done, and the railway authorities should see that these rules are carried out"

Very little has been done in improving the conditions of travelling of third class passengers since Mr. Robertson wrote his report in 1901.

"In considering rates and fares," says Mr. Robertson "we should consider the cost of construction and working in England and compare them with the cost of construction and working in India, and in every other respect if like is compared with like, I think it will be found that the fares and rates in India should, broadly speaking, be only about one-sixth of those charged in England.

Comparing from this standpoint the rates and fares in India were rather high."

It is entirely unfair to compare the rates and fares of different countres in terms of the exchange value of their currencies. The interal value of a currency is different from its exchange value and specially when the latter is fixed by law. He was of opinion that fares and rates in India should be one-sixth of those in England. He got the ratio by comparing the cost of construction and the working in the two countries.

He further recommended that traffic going over more than one Company's line, all fares and rates should be calculated on the through distance and reduction should always be applied on the entire distance and not merely on the local distance of each railway. This recommendation was not given effect to by the Indian Railways although the principle is now accepted by most countries.

Mr. Robertson recommended that :—

1. the maximum only but not the minimum rates and fares should be prescribed ;

2. week-end excursion and season tickets should be issued.

Mr. Robertson in his report referred to every aspect of administration and finished by comparing the utility of broad *versus* metre gauge which is described in Section I, Chapter V.

SECTION 4.

Mackay Committee Report. (1907).

The Railway Board was established on the recommendation of Mr. Robertson but the Government of India had crude methods for railway expansion. They followed the system of 'railway programme' which was as follows :—

Some time before the beginning of each financial year a statement was drawn up by the Government of India containing an estimate of the amount that can be made available for capital expenditure on railways during the year, and proposals as to the manner in which it should be expended, whether for the improvement of the existing system, for progress on lines under construction

or for the commencement of new lines. The estimate of resources included all sums expected to be provided by the State from whatever source and all money expected to be raised by the guaranteed Companies; the scheme of expenditure included expenditure on lines owned by the Government or by guaranteed Companies. This scheme of expenditure, when sanctioned by the Secretary of State with such modifications as he thought necessary, became the railway programme of the year.

There existed at that time great diversity in construction and administration. Railways were constructed partly by the State and partly by Companies to whom a minimum percentage of profit was guaranteed and sometimes aided by rebate, and partly by subsidised companies. Lines owned by Companies which did not receive financial assistance from the Government were few.

Lord Morley, Secretary of State for India, appointed a Committee in 1907 to inquire and report :—

"(1) Whether the amounts allotted in recent years for railway construction and equipment in India are sufficient for the needs of the country and for the development of its trade; and, if not, then :—

(2) What additional amount may properly and advantageously be raised for this purpose?

(3) Within what limits of time and by what methods they should be raised?

(4) Towards what objects they should be applied? and

(5) Whether the system under which the Railway Board now works is satisfactory, or is capable of improvement, and to make recommendations?"

The Committee thought that the present equipment of the Indian railways was unequal to the requirements of trade and recommended that allotments for Railway construction and equipment should be raised.

The Committee was of opinion that it would be prudent for the Secretary of State to raise 9 million pounds in England and 5 million pounds in India in rupees of which 12½ million should be donated to capital outlay and the programme of new construction should be made accordingly. The policy of guaranteed interest should be given up and the money should be raised directly by the issue of Indian stock and debenture stock.

The Committee suggested that one or more of the State lines worked directly by the Government of India should be leased to Companies formed under this scheme.

The Committee further advised that the Government would retain the right to resume at stated times and on fixed and explicit terms any lines the working of which may be placed in the hands of such Companies but recommended that the contracts with the Companies would be for a long period, even up to 50 years.

The Committee thought that the system under which the Railway Board acted was not satisfactory and it made the following recommendations :—

(1) The Government of India should interfere as little as possible with the action of the Board in technical matters.

(2) The Railway Board should be allowed to communicate direct with any Department of the Government of India or with any Local Government.

(3) That the constitution of the Board should be modified and that it should consist of a President and two Members, one experienced in railway construction and the other in railway traffic, whose position should be that of assistants and advisers, of the President.

(4) Advantage should be taken of periods of cheap money to raise funds in excess of immediate requirements.

(5) As far as possible, trunk lines should own as well as construct and work all branch lines.

(6) The Railway Board should be instructed to give consideration to the questions of ensuring closer correspondence betweent the estimated and the actual cost of railway construction.

The Railway Board did not pay attention to this advice. The Retrenchment Committee in 1931 drew attention to this irregularity and cited several illustrations. The estimates are now scrutinised by the Standing Finance Committee for Railways and the estimates are compared with the expenditure by the Public Accounts Committee, both being the Committees of the Central Legislature.

SECTION 5.

Acworth Committee. (1920-1921).

The appointment of this Committee was the outcome of discussions originating in the question of the action to be taken in connection with the East Indian Railway which was then owned by the State but managed by the East Indian Railway Company under a working contract terminable in December 1919. The contract was extended for a period of 5 years and was to expire in 1924 During the discussions a good deal of attention was devoted to the merits and defects of various possible systems of management. The Secretary of State considered it desirable to refer the matter to a Committee which he appointed on the 1st November 1920 and its terms of reference were :—

" (1) To consider, as regards railways owned by the State, the relative advantages, financial and administrative, in the special circumstances of India, of the following methods of management :—

(*a*) direct State management ;

(*b*) management through a Company domiciled in England and with a Board sitting in London ;

(*c*) management through a Company domiciled in India and with a Board sitting in India ;

(*d*) management through a combination of (*b*) and (*c*) ; and advise as to the policy to be adopted as and when the existing contracts with the several railway Companies can be determined.

(2) To examine the functions, status, and constitution of the Railway Board, and the system of control exercised by the Government of India over the railway administration and to recommend such modifications, if any, as are necessary for the adequate disposal of the railway business of the Government.

(3) To consider arrangements for the financing of railways in India, and in particular the feasibility of the greater utilisation of private enterprise of capital in the construction of new lines."

The Committee signed its report in London on the 22nd August 1921 and suggested changes of momentous importance. The report may well be regarded as the landmark in the history of Indian Railways. The Committee recommended :—

" (1) We propose great changes in the constitution, status and functions of the Railway Board. We recommend that at the head

of the Railway Department there shall be a Member of Council in constant touch with railway affairs; and we suggest that with this object there shall be created a new Department of Communications responsible for railways, ports and inland navigation, road transport (as far as the Central Government deals with this subject) and posts and telegraphs. We think the Member in charge of Communications must be an experienced administrator and be able to represent his Department both in the Legislature and with the public. We do not think he need be expected to be a technical expert."

The recommendation was not accepted at the time by the Government of India but in the year 1937 they created the department of Communications and included in it Broadcasting and Airways.

(2) The Committee recommended separation of Railway Finance from the general finances of the Government of India in the following words :—

" We recommend that the Finance Department should cease to control the internal finances of the railways; that the railways should have a separate budget of their own, be responsible for earning and expending their own income and for providing such net revenue as is required to meet the interest on the debt incurred or to be incurred by the Government for railway purposes; and that the railway budget should be presented to the Legislative Assembly, not by the Finance Member of the Council but by the Member in charge of Railways."

The Committee further recommended that, subject to independent audit by the Government of India the Railway Department should employ its own accounting staff, and be responsible for its own accounts.

The recommendation was accepted by the Government of India and the Central Legislature and is described in detail in Section 7.

(3) The Committee recommended by the casting vote of the Chairman that the State should directly administer the State-owned Railways, but the minority was in favour of their administration by Companies.

The majority recommended that the undertakings of the guaranteed Companies, as and when the contracts fall in, be entrusted to the direct management of the State, and that when the contract with the East Indian Railway terminates in 1924, the Oudh and Rohilkund State Railway be absorbed into that undertaking.

The minority recommended that the system of both State and Company management should be continued, and that Government should not be committed to a policy of State management only for all railways. They accordingly proposed a scheme for creating Indian domiciled Companies to manage the East Indian Railway and, possibly, the Great Indian Peninsular Railway. The cases of other lines to be considered on their merits when the contracts became terminable.

The Government adopted an intermediary policy. They accepted the recommendation of the majority and took in their own hands the direct administration of the E. I. Railway in 1924 and absorbed the O. R. Railway in it, and took the administration of the G. I P Railway in their own hands in 1926, but they agreed with the minority and allowed the continuation of both State and Company Railways.

(4) The Committee further recommended that the title of Railway Board be replaced by the title of Railway Commission; Rates Tribunal consisting of an experienced lawyer as chairman and two members to represent Railway and Commercial interests be established; the hardships of third class passengers specially on the occasion of Melas and pilgrimages be removed; the guage question should be further investigated in periods of easy money; funds should be raised in excess of immediate requirements so that it may not be necessary to have recourse to the market at a time of stringency.

(5) The Committee further recommended that branch lines should be worked as far as possible by the main lines to whom they are tributary.

(6) The Committee laid stress on the importance of giving to the Indian Public an adequate voice in the management of the railways and accordingly recommended the establishment of Central and Local Advisory Committees.

The Advisory Committees were established by the Government, but, with few exceptions, these Committeess do not function in the manner expected of them partly on account of the indifference of railway officials and partly on account of the annual change in the personnel.

SECTION 6.

Inchcape Retrenchment Committee. (1922).

The Government of India appointed in the year 1922 a Retrenchment Committee which was presided over by the Right Honourable Lord Inchcape to make recommendations for effecting

all possible reductions in the expenditure of the Central Government. In Part II of the report, they recommended that steps be taken to curtail the working expenses of the Railway so as to ensure an average return of at least 5½ percent and that the system of subsidising Railways should be discontinued. It supported the opinion of the Acworth Committee that money unspent on maintenance and renewals should be carried to a reserve fund. It recommended the abolition of the system of programme revenue expenditure, and that adequate provision should be made annually for the maintenance and renewal of permanent way and rolling stock.

"The Agents", said the Committee, "be designated as General Managers and made responsible for the administration, working and financial results. Excessive centralisation was wrong. References on trivial questions involve a good deal of delay" The Committee also emphasised that the preparation for grouping the railways be taken up forthwith. The Committee was not satisfied that an expenditure of 12½ crores on renewal is justifiable. The re-placement of 405 engines out of a total of 8,136 equivalent to renewal on 20 years' life basis is excessive.[1] The Committee also disapproved of further expenditure of 1·16 crores on track renewals of the N. W. Railway which was earning only 1·7 per cent on capital at charge.

The Inchcape Committee did not review in detail the policy of depreciation fund. The Committee said that the normal annual depreciation for all railways is 9.19 crores.

In the budget for the year 1923-24 a provision was made for 12½ crores, which is excessive by 3.38. The question of depreciation fund will be discussed in Chapter IV.

SECTION 7.

Separation of Railway Finance from General Finance. (1924).

The question of the separation of the railway finances from the general finances of India was discussed as long ago as 1899, during the Viceroyalty of Lord Curzon. Colonel Gardiner, then in charge of the P. W. D. to which at that time the railways were attached, proposed in a Minute, dated the 16th October 1899— " that the financing of the Public Works Department should be a distinct branch of the Imperial Finance, that the capital borrowed

(1) The life of an Engine is forty years.

for it should be regulated on a commercial basis depending on the amount it is desirable to spend (*a*) in developing the country and (*b*) on meeting the requirements of already developed and paying projects."

Lord Curzon, on the 18th Feburary 1900, in a Minute which was forwarded to the Secretary of State with the above, wrote :—

"The system under which our railways are now financed seems to me to be a faulty system and fatal to the development at the very time when developments may be most needed. As long as the system continues, the Finance Department have no alternative but to adopt the attitude, *e.g.*, that they have done with reference to the next year's programme. But neither their orthodoxy nor the stern compulsion of immediate facts makes me any more in love with a system which renders our railway policy wholly subordinate to the exigencies of our general financial position."

Mr. Robertson did not recommend complete separation of Railway finances but he favoured the creation of a Railway Fund. In paragragh 157 of his report he said :—

"The money thus hypothecated would necessarily require to be kept entirely distinct from the general finances of the Government of India. It should, as was done in Ireland, be placed to the credit of the Railway Board, who, subject to the control of the Governor-General in Council, should be left free and unhampered to administer the Fund in such manner as would be more advantageous to the country."

He suggested that the Railway fund be started with a contribution of 15 crores from the general revenue.

In 1906 Sir John Hewett, the Commerce Member, raised the question of separation of Railway Finance but he could not develop his proposals on account of his transfer to the United Provinces as Lieutenant Governor.

The Acworth Committee took up the question and in para. 74 of the report it suggested that Railways should have a separate budget of their own and assume the responsibilities for earning and expending their own income. The first charge on that income after paying the working expenses is interest on the debt incurred by the State for Railway purposes (interest in 1937-38 being Rs. 29·36 crores).

The point is that the Railway Department, subject to the general control of the Government, once it has met its liability to its creditors, should itself regulate the disposal of the balance, and should be free to devote it to new capital purposes (whether directly

or as security for new debt incurred) or to reserve, or to dissipate it in reduction of rates or improvement of services.

The Committee said that they wished to disclaim any idea that the railway organisation should be independent and be an *imperium in imperio*. This is quite out of the question. The Indian Government owns the railways; the Indian Government must control them.

The Government of India had two difficulties in accepting the recommendation of the Acworth Committee.

(1) They could not forego an income from Railways which was estimated at 10½ crores in 1923-24.

(2) They found that it was inconsistent with Section 67A of the Government of India Act, 1919. The Governor-General in Council accepted the suggestion of Mr. Malcolm, now Lord Hailey, that separation be effected by means of a convention which should be laid before the Indian Legislative Assembly in the form of a resolution and the Assembly be asked to agree to it. The resolution drafted by the Government provided that the contribution from railway to the general revenue should be five-sixths of 1 per cent of the capital.

The question was laid before the Legislative Assembly on the 3rd March 1924 in the form of a resolution moved by Sir Charles Innes, which was referred to a Select Committee of the House. The Committee modified the resolution and its report was discussed by the Assembly on the 24th September 1924.

The Sub-Committee increased the contribution to general revenues from five-sixths of one per cent to one per cent and it also altered the constitution of the Central Advisory Committee. Sir Charles Innes said that the Government preferred a convention to legislation as it can be adjusted from time to time in varying needs and difficulties. Sir Basil Blacket, defending the principle of fixed contribution, suggested that the surplus should be deposited in an Equalisation Fund (Reserve Fund) which might be used to meet the deficits in future years. He further condemned the taxation of Railways in the following words :—

"I begin from the principle that taxation on communication is a bad taxation. It is a taxation which falls both on the consumers and producers."

Sir Purshotamdas Thakurdas insisted that direct management of Indian Railways should be provided in the resolution which was accepted in a modified form and the two amendments prepared by

Diwan Bahadur Ramachandra Rao were accepted, and the Legislative Assembly adopted the resolution in the following form.--

"This Assembly recommends to the Governor General in Council that in order to relieve the general budget from the violent fluctuations caused by the incorporation therein of the railway estimates and to enable railways to carry out a continuous railway policy based on the necessity of making a definite return to general revenues on the money expended by the State on Railways

(1) The railway finances shall be separated from the general finances of the country and the general revenues shall receive a definite annual contribution from railways which shall be the first charge on the net receipts of railways.

(2) The contribution shall be based on the capital at charge and working results of commercial lines, and shall be a sum equal to one per cent on the capital at charge of commercial lines (excluding capital contributed by Companies and Indian States) at the end of the penultimate financial year *plus* one-fifth of any surplus profits remaining after payment of this fixed return, subject to the condition that, if in any year railway revenues are insufficient to provide the percentage of one per cent on the capital at charge surplus profits in the next or subsequent years will not be deemed to have accrued for purposes of division until such deficiency has been made good.

The interest on the capital at charge of, and the loss in working, strategic lines shall be borne by general revenues and shall consequently be deducted from the contribution so calculated in order to arrive at the net amount payable from railway to general revenues each year.

(3) Any surplus remaining after this payment to general revenues shall be transferred to a railway reserve; provided that if the amount available for transfer to the railway reserve exceeds in any year three crores of rupees only two-thirds of the excess over three crores shall be transferred to the railway reserve and the remaining one-third shall accrue to general revenues.

(4) The railway reserve shall be used to secure the payment of the annual contribution to general revenues; to provide, if necessary, for arrears of depreciation and for writing down and writing off capital; and to strengthen the financial position of railways in order that the services rendered to the public may be improved and rates may be reduced.

(5) The Railway administration shall be entitled, subject to such conditions as may be prescribed by the Government of India,

to borrow temporarily from the capital or from the reserves for the purpose of meeting expenditure for which there is no provision or insufficient provision in the revenue budget subject to the obligation to make repayment of such borrowings out of the revenue budgets of subsequent years.

(6) A Standing Finance Committee for Railways shall be constituted consisting of one nominated official member of the Legislative Assembly who should be chairman and eleven members elected by the Legislative Assembly from their body. The members of the Standing Finance Committee for Railways shall be *ex-officio* members of the Central Advisory Council, which shall consist, in addition, of not more than one further nominated official member, six non-official members selected from a panel of eight elected by the Council of State from their body and six non-official members selected from a panel of eight elected by the Legislative Assembly from their body.

The Railway Department shall place the estimate of railway expenditure before the Standing Finance Committee for Railways on some date prior to the date for the discussion of the demand for grants for railways and shall, as far as possible, instead of the expenditure on programme revenue show the expenditure under a depreciation fund created as per the new rules for charge to capital and revenue.

(7) The railway budget shall be presented to the Legislative Assembly if possible in advance of the general budget and separate days shall be allotted for its discussion, and the Member in charge of railways shall then make a general statement on railway accounts and working. The expenditure proposed in the Railway budget, including expenditure from the depreciation fund and the railway reserve, shall be placed before the Legislative Assembly in the form of demands for grants. The form the budget shall take after separation, the detail it shall give and the number of demands for grants into which the total vote shall be divided shall be considered by the Railway Board in consultation with the proposed Standing Finance Committee for Railways with a view to the introduction of improvements in time for the next budget, if possible.

(8) These arrangements shall be subject to periodic revision but shall be provisionally tried for at least three years.

(9) In view of the fact that the Assembly adheres to the resolution passed in February 1923, in favour of State management of Indian Railways, these arrangements shall hold good only so long as the East Indian Railway and the Great Indian Peninsula Railway and existing State-managed railways remain under State manage-

ment But if in spite of the Assembly's resolution above referred to Government should enter on any negotiations for the transfer of any of the above railways to Company management such negotiations shall not be concluded until facilities have been given for a discussion of the whole matter in the Assembly. If any contract for the transfer of any of the above railways to Company management is concluded against the advice of the Assembly, the Assembly will be at liberty to terminate the arrangements in this Resolution"

The Assembly in the course of discussion added the following clauses :—

"(*i*) that the Railway services should be rapidly Indianised, and further that Indians should be appointed as Members of the Railway Board as early as possible, and

(*ii*) that the purchases of stores for the State Railways should be undertaken through the organization of the Stores Purchase Deparment of the Government of India."

SECTION 8.

Dickinson's Report. (1926-27).

The Railway Department, after the separation of its finances from the general finance, began to administer it directly and its task was further increased by the State taking direct charge of the two larger Railway administrations, the E. I. Railway and the G. I. P. Railway. The Government of India felt the need of sound financial system and hence in September 1926 they invited Sir Arthur Lowes Dickinson to examine and report on the system of accountancy. He was given two assistants to help him in his work, one railway accounts expert from England, and the other from America. The terms of reference of the Committee were :—

(1) To examine and report fully on the system of Accounting and Audit in respect of all classes of both Capital and Revenue receipts and expenditure in force on the State worked Railways and to make recommendations for revised and improved methods.

(2) To examine and report particularly on the system in force on State worked railways in the following matters and to make recommendations thereon :—

(*a*) The system of accounting in the workshops and the preparation of cost accounts.

(*b*) The system of accounting for the expenditure and outturn of Railway Collieries.

(*c*) The system of Stores accounts.

(3) To consider and report on the feasibility of the preparation of a proper annual balance sheet and profit and loss accounts for individual Railways : for separate organisations such as collieries . and for the whole of the receipts and expenditure of the Government of India relating to railways.

(4) To consider and report on the experimental system in force on the East Indian Railway of the separation of accounts from audit and to make recommendations thereon.

Sir Arthur Dickinson after thorough enquiry submitted his report on the 10th August, 1927.

His main recommendations were :—

1. That the accounts of the Railway Board at present kept by the Accountant General, Railways, be handed over to the Chief Accountant appointed by and responsible to the Railway Board.

2. That the railway accounts be kept on the basis of work done and services rendered by the Railways and of work done for the Railways, both expressed in money values and entered in the books as at the time when the services are performed and the work done and whether paid for at that time or not.

3. That a system of rewards for any suggestions made and adopted for improvements in accounting methods be introduced.

4. That separate abstracts be prepared to include all expenses connected with stores and separate abstracts of the Electric Department.

5. That the "Suspense Account" be treated as Working Capital and included in the Capital Expenditure instead of in the income.

6. That the Controller of Currency act as Banker and keep separate accounts for each railway system, crediting to this account all the receipts and charging to it all the payments.

7. That the Railway Clearing House at Lahore be converted into a Central Station Accounting Office and moved to Delhi ; that, in addition to dealing with the foreign traffic between the four State Railways, it should also handle the local traffic of those Railways, commencing first with that of the North Western Railway ; that branch offices be established at Howrah, Wadi Bunder and Karachi for the traffic audit at those stations ; these branches to be under the control of the Central Station Accounting Office at Delhi ; and that the methods of audit worked out by Mr. W. H. Scott be gradually extended to comprise the whole system of State Railways.

8. That the purchasing of stores be entirely separated from their custody and be entrusted to a supply officer who would purchase on requisition from the Controller of Stores or other authorised officers.

9. That all Railway stores, except imprest stores of small amount at running sheds and engineer's depots, be placed under the control of the Controller of Stores and the detail quantity records be kept; that quantity and money records be kept of all stores by the stores accountants; and that an entirely new system of accounting for Receipts, Issues and Balances of stores be adopted.

10. That the present plan of providing for Depreciation be continued except that:—

(*i*) Additional cost of replacing any unit be a charge to revenue and not to capital;

(*ii*) That the life of any unit be not estimated to exceed 50 years and in case of electrical units 25 years;

(*iii*) That Capital expenditures to the extent to which they do not increase operating revenues or decrease operating expenses be written off to surplus income under the term 'Betterments'.

11. That the Railway Collieries be removed from the control of the separate Railways and concentrated under the control of a Director of Collieries responsible to the Railway Board and that a new system of cost, stores, workshop and general accounts be introduced.

12. That all coal shipped to State Railways be charged at cost, including Depreciation, Sinking Fund and Administration Expenses, and in addition a sum calculated to yield approximately 6 per cent interest per annum on the capital at charge, to the collieries.

13. That all goods carried by a Railway for its own use be charged for transportation at 60 per cent of the full rates.

The Dickinson Committee in Chapter XIV made certain recommendations about the form in which the budget should be presented to the Legislative Assembly, but the Government of India did not accept these suggestions.

Sir Arthur Dickinson also wrote a supplementary report on the 10th August 1927 in which he recommended that the post of the Accountant-General, Railways, be abolished and his work be transferred to the Director of Accounts, Railway Board. The general budget of India should include only the capital expenditure, income from interest and surplus profits, the details being given in the

Railway Department consolidated accounts, a copy of which should be deposited in the Library of the Legislative Assembly. He recommended that the Central Government should no longer keep possession of Railway moneys and their control should in future be vested in the Railway Board. Separate banking accounts should be opened by individual railways and the Railway Board, but the balance of the credit of Depreciation and Reserve Funds be kept by the Central Government to be invested by them in approved securities. The Railway Board at their discretion may require each separate railway system from time to time to transfer surplus to the Railway Board.

Sir Arthur recommended that a fixed rate of interest at 3 2/3 per cent on the capital at charge and not the actual interest be paid to the Central Government.

As regards the investment of Depreciation and Reserve Funds, Sir Arthur said :

" On the whole, the sound policy as long as these Funds continue to accumulate would seem to be that a definite proportion thereof might be invested and used for new works and extensions or for additional working capital ; that a certain other proportion should be invested in Trustee Securities outside India, and that the remainder should be loaned to the Indian Government at interest."

The report objected to the system of calculating the 'Government's share of net revenue and said :

" The present practice of calculating the Government's share of net revenue on the basis of the accounts of one year and charging it against Railway Net Revenue two years later may easily result in the Railway Administration handing over to the Government in a particular year a sum greater than its whole surplus revenue." And it recommended :

" That the calculation of the proportion of Surplus Earnings to be allotted to the Central Government and the Railway Department be made entirely on the result of the year under review."

SECTION 9.

Raven Committee. (1926).

The transfer of E. I. and G. I. P. Railways to State management brought the major portion of the broad gauge railways in India under the direct control of the Railway Board which necessitated devising a sound system of accounting and economical use of Railway workshops. In the years 1926 the Railway Board

appointed a Committee to enquire into matters connected with the Mechanical Departments of the State Railways and secured the services of Sir Vincent Raven, Chief Mechanical Engineer of the North Eastern Railway. Mr. J. M. D. Wrench, Chief Mechanical Engineer, G I. P. Railway, was associated with him. The Committee disfavoured the general practice of keeping a fairly considerable stock of stores in running sheds and other places which had been charged off. The workshop at Moghalpura completely usurped the functions of Stores Department and assumed the responsibility of distribution. The object of workshops is to produce and not to distribute. The Committee recommended that all materials required by workshops should be stored in workshops under the supervision of Stores Department and not under Mechanical Department. The life of a boiler should be reduced to 17 years and a locomotive should outlive the boilers. The Committee recommended the manufacture of spare parts of rolling stock in their own workshops. The manufacture by Railway workshops would be cheaper and more expeditious. The Committee thought that the main workshop at Moghalpura, Lahore, on the N. W. Railway, was well laid out and well equipped, but the supervision and inspection was inadequate. It recommended that Karachi and Rawalpindi Carriage and Wagon shops should be closed down and a well equipped wagon repair shop should be laid out at Sukkur. The Committee did not attempt to suggest co-ordination of the works done in workshops owned by Company-managed and by State-managed lines.

SECTION 10.

Separation of Accounts from Audit. (1929)

The Acworth Committee recommended the separation of accounts in 1921 and it said :

"Economical railway management cannot be ensured without a proper system of railway accounting. Apart from a mere audit check of receipts and disbursements, a railway requires a large number of financial returns of various kinds ; not in order to say whether the expenditure incurred has been duly authorised or receipts duly accounted for, but to say whether expenditure is being wisely incurred, whether retrenchment of habitual expenditure is possible under one head, whether new expenditure under another head is proving profitable or even whether a larger expenditure would be likely to be fruitful ; and so on. These are not matters

to be left to an outsider. A practical railway man, who knows what he is doing in the present and what changes he is meditating for the future, is alone competent to prescribe and to make use of returns of this kind." They further said.

"We recommend that the Railway Department should be responsible for its own accounts. We do not exclude, of course, such independent and separate audit as the Government of India may think proper to make on the same principle that obtains in any commercial Company where the shareholders appoint an outside firm of accountants to check and report on the books which are kept by the servants of the Directors, the ordinary accounting staff."

The Railway Board pleaded in 1929 that separation of accounts from audit will be economical. The argument of economy influenced the Standing Finance Committee and the Assembly, who consented to the separation. The Railway Retrenchment Sub-Committee pointed out (*Vide* Appendix E of the report) that separation resulted in increasing the expenditure in all State Railways as shown in the following table :—

Railways.	Cost of Audit accounts in thousands of rupees in 1924-25.	Cost after separation in thousands of rupees in 1930-31.
E. I. Railway	18,09	27,58
G. I. P. Railway	14,17	19,06
N. W. Railway	16,62	27,25
E. B. Railway	7,94	12,54

The Sub-Committe said that the cost of audit (excluding the cost on Company-managed Railways) is at present 15 lakhs and that practically the whole of it can be saved by amalgamation.

Separation of audit from accounts was urged by Mr. Hayman on the ground of economy and the following figures show that the separation has not proved economical. The expenditure after separation has been increasing and not diminishing as is shown below :—

In Thousands of Rupees.

Year.	Total cost of accounts excluding strategic lines.	Cost of audit.	Total.
1926-27	1,04,94	8,58	1,13,52
1927-28	1,12,91	9,23	1,23,14
1928-29	1,16,77	10,37	1,27,14
1929-30	1,22,41	13,70	1,36,14
1930-31	1,29,80	18,70	1,46,50

Separation of audit from accounts has not proved to be economical and its efficiency is very doubtful.

SECTION 11.

Railway Retrenchment Committee. (1931).

The separation of the railway finance from the general finance was carried out at the time of general prosperity. The railway income increased from 107·48 crores in 1924-25 to 111·14 crores in 1928-29. The world depression commenced in 1929-30 and the railway income began to diminish. During the boom period the Railways after discharging all their obligations were able to build a reserve amounting to Rs 18·42 crores. The budget for the year 1930-31 showed a sign of decline. The income was operating by 11 crores and further reduction was threatened. The working ratio which was 61 in 1924-25 rose to 69·6 in 1930-31. The Railways which showed a net profit of 13·16 crores in 1924-25 now showed a loss of 7·26 crores. The Reserve Fund in two years was depleted to 5·20 crores. The reduction of expenditure became essential. The same difficulty occurred in the General Budget of the Government of India. On the suggestion of the Legislature, a Retrenchment Committee was appointed by the Government of India to suggest all round retrenchment in expenditure. The Retrenchment Committee appointed a sub-committee to suggest economies to be effected in Railways. The Railway Retrenchment Sub-Committde met at Simla and examined the members of the Railway Board and the heads of departments. It did not examine the expenditure on working lines and the scope of its work was limited to expenditure connected with the office of the Railway Board.

The Retrenchment Committee felt that the net loss to railways in the year 1931-32 under the existing conditions would be between 11 and 12 crores. It suggested various methods for the reduction of expenditure.

After reviewing the expenditure in the office of the Railway Board (including attached offices), and the offices of the Chief Controller of Standards and the Controller of Railway Accounts the Sub-Committee recommended :

(1) that the number of members of the Railway Board should be reduced from 3 to 2 ;

(2) that the number of Directors should be reduced from 5 to 3.

(3) that the number of Deputy Directors should be reduced from 5 to 4 ;

(4) that the posts of Deputy Secretary and Assistant Director of Finance should be abolished ;

(5) that the posts of Chief Controller, Deputy Chief Controller, Assistant Chief Controller in the Central Standards Office, should be abolished and replaced by two posts of Deputy Directors in the Railway Board ;

(6) that the posts of Controller of Railway Accounts, Deputy Controller of Railway Accounts, Assistant Controller of Railway Accounts and Assistant Accounts Officer should be abolished and replaced by a post of Deputy Director of Accounts in the Board's office ;

(7) that the total cost of establishment in all these offices taken together should not exceed five lakhs ; and

(8) that the total of other charges should be limited to 5½ lakhs.

The saving resulting from the adoption of these recommendations was estimated to be five lakhs.

The Sub-Committee recommended a reduction of 1½ lakhs in Inspection by reducing the number of circles from 8 to 5 and by replacing the annual inspection by Inspectors once in two years.

The Sub-Committee examined the financial aspect of the separation of accounts from audit and came to the conclusion that separation in all Railways resulted in increased direct cost.

The Sub-Committee recommended the abolition of the office of the Director of Railway Audit, replacement of concurrent check by test check, reduction in the expenditure of Clearing Accounts Office by at least 1 lakh and reduction of the cost of accounting and audit by three and ten lakhs respectively. I had the privilege of

working on this Committee and my suggestion, discussed in a note appended to the report, was that the Clearing Accounts Office should be abolished. Its maintenance is unnecessary. The accounts between various railways should be adjusted by taking the mean value of the figures of the last ten years.

Under the heading 'Miscellaneous Expenditure' the Committee recommended :—

(1) that the expenditure on Surveys be reduced to a minimum ;

(2) that the Railway Rates Advisory Committee be abolished, an *ad hoc* Committee being appointed when necessary to investigate any complaints that the public are entitled to make under present arrangements (saving one lakh) ;

(3) (*a*) (*i*) that the Central Publicity Bureau be abolished and replaced by a small establishment of two officers and a small staff under the Railway Board, and (*ii*) that the staff in the London Office be reduced to one officer and three clerks (saving 2½ lakhs) ;

(*b*) that the expenditure on Publicity on railways should be reduced by five lakhs ;

(4) that the staff in the Dehra Dun Staff College should be reduced (saving 1 lakh) ; and

(5) that the total lump sum provision for special investigations be limited to one lakh and that expenditure from this sum should not be incurred without the previous approval of the Standing Finance Committee for Railways (saving 5 lakhs).

The Committee recommended a gradual cut in the salaries of staff from 3 1/8 per cent to 20 per cent but the Government of India accepted a uniform cut of 10 per cent and limited graded cut in the case of low-paid employees.

The Sub-Committee did not have the opportunity to examine the open line works, but it made the following observations in paragraphs 121 and 122 of the report :

"121. In the years 1924-25 to 1930-31 very nearly 170 crores have been expended on renewals, replacement and additions. Of these 105 crores represent new borrowed money and 65 crores

appropriations from Depreciation Fund. In addition 15 crores were spent on the purchase of new lines, as shown below :—

			(Lakhs)
1926-27	Delhi Umballa Kalka Railway	...	4,04
1928-29	Burma Railways		3,99
	Mirpurkhas-Jhudo Railway	...	11
1929-30	Southern Punjab Railway	...	7,05

122. Interest charges on commercial lines have increased from 22·67 crores in 1925-26 to 32·09 crores in 1931-32 *i.e.*, an increase of nearly 9½ crores."

The Sub-Committee gave a detailed list of new constructions (Appendix F, page 139) which showed that in quite a number of cases the original estimate of expenditure was considerably exceeded, and consequently the net return is much less than anticipated. The Committee drew special attention to a few projects. The Calcutta Chord Railway, which was originally estimated to cost 180 lakhs which is now estimated to cost 320 lakhs, the Kangra Valley Railway which was started on an estimate of 134 lakhs and is now expected to cost nearly 3 crores.

The Committee concluded by noting that :

"The total expenditure on new constructions from 1924-25 to 1930-31 is over 42 crores, and it is the interest charges on this capital and on the capital sunk on Open Line Works which amounts to over 105 crores in the same period (exclusive of 15 crores for the purchase of existing lines) which have contributed to a great extent to the condition in which railways find themselves at present. We consider that this ought to be a lesson to the Railway Board for the future."

The Sub-Committee left a number of important questions such as close scrutiny and examination of the expenditure on repairs and maintenance, comparison of fixed and variable expenditure, examination of divisional organisation, redistribution of the present State-managed system into smaller units, absorption of feeder lines into main lines and the question of rates and fares ; and it recommended immediate appointment of a small Committee to scrutinise these points. It was expected that the Committee would be appointed immediately and would include non-officials. The Government of India did appoint a Committee presided over by Mr. Pope but considerably narrowed down its scope of inquiry.

SECTION 12.

Pope Committee. (1932-33).

On the recommendation of the Retrenchment Committee the Government of India invited Mr. Pope in 1932 to examine in detail the proposals for retrenchment. He was assisted by four experts from different Indian Railways. The Committee made the following recommendations :

(1) Job analysis could be applied on Indian Railways with economy and it should be inaugurated on certain defined principles.

(2) The importance of the question of intensive use of locomotive power was emphasised.

(3) Research and experiments were essential under modern conditions It recommended that the Railway Board should arrange the distribution of technical information on an organised basis and that they should make it known that organised and continuous research was of major importance.

(4) The advantages to be gained from alterations to engines and rolling stock in connection with standardisation and improvements in design were important, but all administrations should be reminded of the necessity of satisfying themselves in regard to the stock position, before the alterations are effected, so that as little serviceable material as possible be scrapped.

(5) Carriage and wagon hot boxes are increasing and are a serious operating and commercial inconvenience. A co-ordinated attack through the Indian Railway Conference Association was recommended.

(6) The Committee found a number of surplus men on the railways and they thought that these would be unnecessary if the schemes for economy set down in the report were carried into effect. Surplus staff means extravagance. New and improved methods result in reductions in man power in relation to work to be done.

(7) If railway plant and equipment is to be maintained in an efficient and up-to-date condition recognition of the principle of spending money to save money was necessary.

The Committee emphasised the importance of amalgamation which can be achieved in two ways, either by combining into one railway two or more existing railways, or by a regrouping of existing railways or portion of existing railways in entirely new groups of

railways. The Committee said that it was not in possession of all the relevant factors and circumstances but there was one particular feature which they felt should receive consideration, *viz.*, the need of a close study of the matter well in advance of any fundamental change, so that any action taken was in accordance with a preconceived plan. Great Britain and Germany have passed through the difficult phase of amalgamating their railways from a number of different undertakings into four and one respectively. In the United States large amalgamations are being carried out.

The Committee considered that the questions arising in schemes for amalgamation should be studied in advance in the light of the experience gained in the various countries in which such schemes have been put into effect, by experienced officers representing commercial, operating, civil and mechanical engineering interests.

Amalgamation would be immensely simplified and the resultant economies realised the quicker if previous studies were made to discover the most efficient standard practices and organisation and how best to advance the schemes so that stage by stage finality is reached with a minimum of dislocation and an avoidance of unsuitable methods.

The Committee emphasised in the end the need of constant organised research and investigation into every man hour and every item of material used and that no saving is too small to be ignored.

SECTION 13.

Statutory Railway Authority. (1933).

The general feeling in India as evinced during the debate in the Legislative Assembly on separation of Railway finance from general finance was in favour of direct State management. Although the Government of India had direct charge of four big Railway administrations, yet they did not accept the policy of amalgamation and State management as a matter of universal application. The Round Table Conference, while discussing the future constitution of India could not leave out the administration of railways in the general scheme of Federation. The discussion on the scheme of future administration of Railways was initiated by General Hammond who in 1931 wrote a Memorandum on the statutory control of railways in which he described the manner of administration of railways in different countries, and gave a rough sketch of administration as it then existed and as it ought to be under the new Federation.

The mode of administration in various countries will be described in detail in the next chapter. Most countries administer the State Railways by a Board or Committee whose constitution and responsibilities are different in different countries but the fundamental principle is that Railways should be run on business lines and free from political influence. The 'white paper' published by His Majesty's Government on the scheme of Federation considered it essential [para. 74] that while the Federal Government would necessarily exercise a general control over railway policy, the actual control of the administration of the State Railways in India (including those worked by Companies) should be placed by the Constitution Act in the hands of a Statutory Body, so composed and vested with such powers as would ensure that it is in a position to perform its duties upon business principles, and without being subject to political interference

The Secretary of State for India convened a special committee in London to which representatives of various parties in the Central Legislature were invited. The result of its deliberations was published under the authority of the Secretary of State for India. The Committee recommended that the Railway Authority should consist of 7 members, but they were not unanimous about the manner of appointment. Some members of the Committee thought that the statutory body should be elected by the Indian Legislature and should be responsible to it. The Chief Commissioner and the Financial Commissioner, being the principal executive officers, should not be members of the Railway Authority, but they should have the right to attend its meetings. The Railway budget should not be laid before the Legislative Assembly or the Finance Committee but the Revenue estimates should be submitted annually to the Federal Government, which should in turn submit them to the Federal Legislature, but these estimates should not be subject to vote. If the revenue estimates disclose the need for a contribution from general revenues, a vote of the Legislature will, of course, be required. The programme of capital expenditure should be submitted to the Federal Government for approval by the Federal Legislature. The Federal Government may, however, empower the Railway Authority to incur capital expenditure subject to conditions to be prescribed. Maxima and minima rates and fares should be fixed by the Railway Authority subject to the control of the Federal Government.

There was a discussion about the manner of the establishment of the Railway Authority. The Indian members were of opinion that the powers and duties of the Railway Authority should be fixed by an Act of the Indian Legislature. The provision for the establishment of the Railway Authority was made in the Government

of India Act, 1935, and its functions were described in Chapter VIII and the details were given in the Eighth Schedule appended to the Act. The main provisions are as follows :—

(1) The executive authority of the Federation in respect of the regulation and the construction, maintenance and operation of railways shall be exercised by a Federal Railway Authority (Section 181).

(2) The number of members of this authority will be seven. [Schedule VIII (1).]

(3) A person shall not be qualified to be appointed or to be a member of the Authority (*a*) unless he has had experience in Commerce, industry, agriculture, finance and administration, or (*b*) if he is, or within the last twelve months preceding has been, a member of the Federal or any Provincial Legislature, or (*c*) in the service of the Crown in India, or (*d*) a railway official in India.

(4) The authority shall establish and control a fund and all money received by the authority whether on revenue account or on capital account shall be defrayed out of that fund. (Section 186).

(5) Any surplus on revenue account shown in the accounts of the Authority shall be apportioned between the Federation and the Authority according to a scheme to be prepared by the Federal Government. (Section 186).

(6) There shall be deemed to be owing from the Authority to the Federation such sum as may be agreed or, in default of agreement, determined by the Governor General in his discretion and be equivalent to the amount of money provided to the Authority, and the Authority shall pay interest on that amount.

(7) Railway Rates Committee shall be appointed by the Governor General.

(8) The Authority shall not be liable to pay the Indian Incometax or the Super Tax on any of its main profits or gains.

(9) At the head of the Executive staff of the Authority there shall be a Chief Railway Commissioner who shall be appointed by the Governor General exercising his individual judgment after consultation with the Authority. (Appendix 11).

(10) The Financial Commissioner shall be appointed by the Governor General. (Appendix 12).

(11) The Chief Commissioner and the Financial Commissioner shall have the right to attend any meeting of the Authority.

The Government of India Act left open the following three important points :—

(*a*) Whether the Railway Authority will continue to pay 1 per cent of the capital at charge to the general revenues as fixed by the Convention of 1924 (*vide* section 7) ;

(*b*) Whether the Authority will admit the entire debt of the Railways and in case of dispute, how will the amount be determined? Will the interest on un-admitted debt be borne by the Federal revenues?

(*c*) Whether the members of the Authority will be whole time officers or they would get honorarium for attending meetings like the directors of Companies. In the latter case, the Chief Commissioner will be like a Managing Agent.

The Authority will exercise powers now vested in the Legislature, the Railway Finance Committee, the Governor General in Council, the Public Accounts Committee, the Advisory Committee, for railways the Member for Communications and the Secretary of State for India. What power will the Federal Government exercise in the administration of Indian Railways?

The powers given to the Railway Authority by the Government of India Act of 1935 are much wider than those enjoyedby a similar Authority in any other country.

SECTION 14.

Wedgwood Committee. (1936-37).

The Public Accounts Committee of the Legislative Assembly in its report signed on the 5th September 1936 remarked that it was satisfied that strenuous efforts have been made during the past few years to effect economies and to stimulate railway revenues, but they felt that nothing should be left undone to secure a re-establishment of the commercial solvency of railways. But in spite of all precautions, the budget will show a deficit from 7 to 8 crores. The Committee therefore urged that the Government of India should immediately obtain the services of an acknowledged expert

in Railway management to conduct an examination of the whole field, and recommend steps which will secure definite improvements in railway finances to the extent of something like 3 crores a year immediately and ultimately of such magnitude as is required to maintain full solvency on a strict accounting basis not by mere transfer of liabilities to general revenues.

The Government of India accepted the recommendation and a Committee with Sir Ralph Wedgwood as chairman was appointed on the 20th October 1936. The terms of reference of the Committee were as follows :—

"To examine the position of Indian State owned railways and to suggest such measures as may otherwise than at the expense of of the general budget."

(*i*) secure an improvement in the net earnings, due regard being paid to the question of establishing such effective co-ordination between road and rail transport as will safeguard public investment in railways while providing adequate services by both means of transport, and

(*ii*) at a reasonably early date place the railway finances on a sound and remunerative basis."

The Committee reviewed the financial position for the last 12 years since the separation of the railway finance.

The total surplus during the first six years was 52·64 crores and the net loss during the next six years was 41·63 crores. The loss calculated by the Committee will be greater if we include the non-payment by railways of their obligations to the general revenues during the last four years. The Committee after surveying the position came to the conclusion that :—

(*a*) The percentage of locomotives and of carriages under or awaiting repair is excessive.

(*b*) The stock of locomotives is excessive and is capable of reduction.

(*c*) Locomotives, carriages and wagons which have become un-economical should be scrapped.

The Committee recommended various other measures to effect economy in the engineering, locomotive, workshops and transportation sections of the department and suggested that first class accommodation should be abolished on most branch lines.

The Committee thought that capital expenditure in the past was too lavish and the Government laid greater stress on prestige

than prudence. 'Every capital scheme', said the report, 'has to be justified and should be limited to the narrow resources of the country, and not by the practice of rich countries.' The Committee desired that the accounts officers of the State managed railways should be held responsible to the Agents. It recommended that the purchases should be made through the Indian Stores Department it also recommended the co-ordination of researches done by the and Indian Stores Department and the Central Standards office.

The Committee devoted a chapter on co-ordination of Road and Rail transport which will be discussed in detail in Chapter VI. Some of its more important recommendations are as follows :—

(1) Existing statutory regulations of Railways are suitable and no alteration is needed.

(2) Time tables and fares should be fixed in case of lorries and buses

(3) Motor Vehicles amendment Bill should be passed as quickly as possible.

(4) Equitable basis for the taxation of Goods Motor Vehicles should be the maximum laden weight.

(5) Diesel oil vehicles should be placed on the same footing as petrol vehicles.

(6) Railways should have full powers as other users (*a*) to run road services, (*b*) to arrange road services through contractors. and (*c*) to invest money in or enter into working agreements with road transport undertakings.

(7) It urged the importance of voluntary co-ordination between railways and the more responsible elements in the road transport industry.

(8) It did not recommend reduction in fares to meet road competitions.

Contrary to the recommendations of the Acworth Committee the Wedgwood Committee did not favour the State taking over the Company managed lines as soon as the period of their terms expired. The Committee said : "Indeed we should urge a radical reconsideration of the whole question of State management and a fresh examination of the possibility of creating privately managed Companies with Boards of Management domiciled in India." The Com-

mittee was against amalgamation and thought that the option to take over the Company managed lines should be deferred till 1945. (1)

The railways had not been paying the contribution to general revenues as fixed by the Convention of 1924 and the arrears of the contribution amounted to 31 crores. The railways have taken 31½ crores from the depreciation fund. The Committee said: "We understand that it has been decided to write off both these liabilities." Who decided to write off is not mentioned in the report.

As regards the convention of 1924, the Committee said that the railways should no longer be looked upon as a possible source of revenues for the relieving of general taxation The Committee recommended that the new Railway Authority should be free from political and administrative interference and the Government should in future confine its interest to a debenture holder. The Committee further recommended that the Authority should have power to raise money in open markets and they should delegate larger powers to the Railway Board. According to the new constitution the members of the so-called Railway Board will be advisers of the Chief Commissioner. If we visualise the recommendations of the Committee it means that the Railway Authority will enjoy the privileges of a private Company without responsibility to shareholders and protected from their competitors by Statutory regulations and relieved from the obligations of any contribution or tax to the Government.

The Railway Board issued a statement showing the actions they have taken to give effect to the recommendations of the Inquiry Committee. They issued instructions to carry out the recommendations dealing with the repairs of carriages, wagons and locomotives; they have also abolished first class travelling on certain branch lines, and they are also carrying out the recommendations about statistics, incivility and dishonesty. The major recommendations dealing with the rates and freights, and acceleration of services are still under the consideration of the Railway Board.

(1) Dates of termination of contracts

A. B R	31st December 1941
B. B. & C. I. R	31st December 1941
B N W R.	.. 31st December 1942
M S M. R.	... 31st Decemcer 1945
S I R	.. 31st December 1945
B N. R.	... 31st December 1950

SECTION 15.

Pacific Locomotive Committee. (1939).

The report of the Honourable Mr. Thom, Chief Justice of the Allahabad High Court, on Bhita accident (E. I. R.) gave rise to discussion whether the accident was due to the faulty design of the Engine (known as XB Engine), or to the defect in the track, or to the excessive speed greater than the scheduled speed. The design of the engine was freely criticised and it was pointed out that the Standardisation Department was responsible for the faulty design, and the Railway Board made a mistake in ordering a fairly large number without sufficient trial. The whole question was referred to a Committee which was presided over by Lt.-Colonel Mount, and its terms of reference were :

"To consider the design and operation of three classes of engines, *viz.*, XA, XB and XC types, and to advise on" :

(1) the suitability of the designs, as originally framed and subsequently modified, for the type of work for which the engines were intended ;

(2) the suitability of the procedure followed in preparing and approving the designs for these engines ;

(3) the circumstances attending, and justification for, the initial and subsequent purchases of these engines ;

(4) the conditions subject to which these engines can be used with safety, with particular reference to their suitability for the track on which they are required to run and, conversely, the suitability of the track for these types of engines ;

(5) any modifications which would have the effect of increasing their scope without any sacrifice of safety ; and

(6) any modifications that should be made in the procedure hitherto followed for the trial and purchase of engines."

As regards the first term of reference the Committee (in para. 62) said : " In our opinion the selected types of bogie, hind track and coupling between engine and tender, were unsuitable and the amount of side control provided was inadequate."

But the faulty design was the logical consequence of the instructions given by the Railway Board to the Locomotive Standards Committee in 1924 for providing increased boiler power and extended use of inferior coals. Such instruction cannot be taken as justification for faulty design which involves safety of passengers.

As regards the system of purchase, the Committee said that the procedure was sound and practical but involved divided responsibility. It further said that the preparation of drawings and specifications for the X class engines should have awaited more definite results of the performance of the 6 preliminary engines.

The Railway Board purchased 218 Pacific Engines in good faith between 1925 and 1928 but in view of the warnings received the wiser course for the Board to have taken, as indeed they admit to-day, would have been to continue the purchase of further well tried B. E. S. A. engines (suitably modernised), pending the pursuance of the policy of thorough trial of the new Pacific types. It further said that, indeed, one main defect in design, namely, the weakness of the bogie control springs, though-recognised as early as January 1929, was not effectively pursued.

The most valuable part of the Report is the emphasis it laid on the principle that safety in riding is a joint matter between the engine and the track. Inter connection between design of the engine, the speed, and the track was first recognised by Americans who commenced their researches in 1914. They determined flange forces exerted by the locomotive by measurement of the track. The subject was discussed in Germany when a special Committee was appointed in 1928 to enquire the cases of derailment of several Express trains. The conclusions arrived at by the Committee are given in the report.

It was proved that on a bad track with high velocity locomotives having only coupled axles, do not run so smoothly as engines fitted with a bogie. The subject was studied in France, England and in India.

It is now proved that the strength of the track should be determined not only by the consideration of total weight (called axle weight), but also by the side displacements of the engine wheels, which depend on the mechanism and the velocity.

The Railway Board in a period of three years ordered a large number of heavy engines and then discovered that the track, the bridges and the sheds were not strong and large enough to accommodate them and they began to spend large sums of money in altering them.

The increase of speed is the fundamental problem in the design of every locomotive and the report has made it abundantly clear that speed cannot be achieved by increasing the capacity of the boiler, but it depends on its mechanism and also on the strength of the track. The Committee has fixed the upper limit of 45 miles an hour for the speed of X class engines and it said :

"That when the engines have been modified according to our recommendations, and when measures have been adopted to improve track and engine maintenance on the lines indicated by us, it will be permissible to remove the restriction of speed (45 miles an hour) on X class Pacifies."

The Committee emphasised the importance of researches and experiments in track distortion due to lateral vibrations of engines at different speeds.

In my opinion it was a mistake to order a large number of X type engines without sufficient trial. It was known at that time that distortion of track does not depend on the weight alone but it also depends on the side motions of the engine. These variations are greater at a higher speed. The safe limit of speed on the existing track could have been calculated easily. The safe speed of 45 miles an hour, which the Pacific Committee now discovered, could have easily been obtained after the report of the Committee appointed by the Government of India in 1924.

There is one more factor which has so far been ignored and it is the length of the train. The lateral motion of the engines must necessarily be communicated to the carriages with varying intensities and hence in my opinion the axle weight of carriages and the length of the train should also be taken into consideration. Time is an important factor in restoring the normal condition after distortion and time depends on the length of the train and its speed. The problems before us are (1) to determine the safe speed for a given engine on a given track; (2) what alterations should be made in the design of an engine and in the track to enable us to increase the limit of safe velocity; and (3) how far the safe velocity depends on the axle weight and the length of the train?

Every country is attempting to solve the problems and until the solution is obtained, we should move slowly and remain satisfied with lower speed limit. I wish the experiment may be tried with varying number of bogies and the effect on different carriages may be observed.

Personal Observations.

Close examination of the reports of various Committees appointed to examine Railway and other subjects, tend to show that two types of Committees were found to be most effieient:

I. The Committee consisting of a *single individual* with wide knowledge in his own subject and having no prejudiced or interested opinion in the matter he is required to advise on. The report will necessarily be brief. The conspicuous examples of a single member Committees are Robertson's and Niemeyer's Committees.

II. The Committee representing varied views, which should include persons to represent commercial and industrial interests and persons representing public opinion. The notable examples of such Committees are the Acworth Committee and the Islington Commission and in a small way the Railway Retrenchment Committee.

In the former case, the expert feels his personal responsibility and gives his views concisely and in a straightforward manner. In the latter case, every side of the question is publicly discussed. The written opinion and oral evidences of persons holding divergent opinions help the Committee members to formulate recommendations having maximum agreement. The recommendations are very valuable if by chance they happened to be unanimous.

But the report of the Committee consisting of departmental officers with an outside expert as Chairman is an essay valuable to students of railway Economics. The departmental officers get a certificate from the expert who is not acquainted with Indian conditions and who acts as a mouth-piece of the department to convince the Government in favour of their own proposals.

CHAPTER II.

Foreign Railways.

The subject matter in this chapter is taken from Road and Rail in Forty Countries by Dr. Wohl and Professor Albitrecia, Universal Directory of Railways, Memorandum by General Hammond, the Administration Reports of various countries and my own observations in 1933.

SECTION (1)

United Kingdom.

The first commercial Railway line in England was opened on September 15th, 1830, between Liverpool and Manchester (20 miles). After that date Railway construction was pushed forward with feverish haste so that by 1850 there were 6,303 miles of line in the United Kingdom, while France at that time had but 1,916 miles. From the Geographical point of view it is necessary to note the great influence exercised by London in the plan of the British Railway System. All the principal lines converge on the capital so that time is frequently saved by travelling via London when making a journey between two towns whose geographical position would suggest the adoption of a more direct route. The sea, which also plays an important part in the economic life of Great Britain, has likewise influenced Railway organization. All the great centres are closely linked up with the seaports, whilst the marine stations are well supplied with modern installations and equiped to deal with the traffic they handle—passengers, coal, or fish. During the period of development of the Railways, the greatest freedom was left to the Companies. Before the Great War there were 118 companies which managed the Railway system in the United Kingdom of which 27 were constituent or principal Companies and the remaining 91 were subsidiary Companies

On account of the economic difficulties, it was decided to amalgamate them into four groups. This was effected *by the Railway Act of 1921*. This act of 1921 which is a landmark in the history of British Railways not only amalgamated 118 units into four groups but it overhauled completely the general administration and supervision. The four groups of Railways are described in detail in section 6 Chapter III.

As regards passenger traffic, the Companies are bound to carry all persons who wish to travel. All passengers are entitled to

take with them a certain quantity of luggage. The stations must have proper waiting-rooms and lavatory accommodation. The Railway Companies are bound to provide facilities for carrying officers and soldiers, including their families, when they travel at Government expense.

If any Company fails to afford these facilities the user can appeal to the Railway Rates Tribunal. The railway Companies are under the obligation to receive and forward all merchandise except dangerous goods.

The control of the Government is exercised by the Ministry of transport which was formed under the Act of 1919. It co-ordinates functions relating to rail and road transport.

Great Western Railway has amalgamated 7 constituent and 26 subsidiary Companies. It also retains its old name and identity under the grouping system. The Great Western Railway Company was originally incorporated in 1835 for a railway from London to Bristol, which was reached in 1841. It acquired the Bristol and Exeter Railway in 1876, the South Wales Railway, and the West Midland Group in 1863, the South Devon in 1878 and the Cornwall in 1889. The original gauge was 7 ft., but a gradual process of conversion from 7 ft. began in 1872 and by May 1892, the gauge of the entire line was converted to 4 ft. 8½ ins. Several new routes have since been constructed, including the Severn Tunnel route, opened in 1886, the South Wales and Bristol direct route via Badminton in 1903, the direct route to the West via Westbury in 1906, and the direct Birmingham line in 1910. The Company owns an extensive system of docks at South Wales ports.

The Company has a chairman and a Deputy Chairman and 12 other directors. The administration is carried on by the General Manager who has under him several officers in charge of special work. The work is divided into the following branches (1) Accounts; (2) Way and Works under a Chief Engineer who has under him 11 Engineers each in-charge of a section of the line; (3) Rolling Stock under a Chief Mechnical Engineer who has under him 9 section Locomotive Superintendents; (4) Traffic under a Superintendent who has under him an Operating and a Commercial Assistant and also 10 section Superintendents; (5) Goods under a Chief Goods Manager, who has under him eleven Goods Managers each in-charge of a section of the line; (6) Road transport; (7) Hotels, Refreshment Rooms and Restaurant Cars services. The administration has district and not divisional organisation in the sense outlined in Sec. 4 Chap. III.

The Railway has 9112 mileage and its capital is £149,867,883. It has 3633 locomotives, 24,386 carriages and 81,370 wagons.

London and North Eastern Railway—The present system was organised by the amalgamation of 7 constituent and 28 subsidiary lines. The Stockton and Darlington Railway, opened in 1825 was the first public railway in the world, and it was the nucleus of the present system. Incorporated in 1854, the North-Eastern Railway included the York, Newcastle and Berwick, York and North Midland and the Leeds Northern Railways. The Great Eastern was an amalgamation of small lines in East Anglia, chief of which was the Eastern Counties Railway, incorporated in 1836. The Company provides excellent Continental services via Harwich, and is a large dock owner on the north-east coast.

The administration work is organised in three divisions called Southern, North Eastern, and Scottish areas. In each area there is a local board of the Directors under a chairman. At the Headquarters of each Division, there is a Divisional General Manager and there are superintendents under him for Way and Works, Traffic Commercial, Police and Hotels and Catering Departments.

The length of the line is 6,878 and its capital is £376, 967,643 and it has 6,591 locomotives 46,389 carriages and 249,155 wagons.

London Midland and Scottish Railway.—The London Midland and Scottish Railway resulted from the amalgamation of 7 constituent and 27 subsidiary Companies in January 1923. The London and North-Western Company was formed in 1846 by the amalgamation of the London and Birmingham, Grand Junction, an Manchester and Birmingham Railways, which were themselves amalgamations of other smaller lines.

The L. M. S. Railway primarily serves the centre and north-west of England, North Wales and the North and North-West of Scotland, generally possessing the shortest routes between London and places in these areas. It also has access to South Wales, East Anglia, and the noth-east coast of Scotland. It provides steamer communication with Ireland via Holyhead, Heysham, and Stranraer, and has important interests in Northern Ireland, resulting from its acquisition in 1902 of the former Belfast and Northern Counties Railway. It also owns and manages some twenty-nine hotels.

In this Company, the chairman of the Board of Directors Sir Josiah Stamp is also the General Manager. There exists an Executive Committee consisting of the Chairman of the Directors or the General Manager, and Vice-Presidents in-charge of Works, Traffic (Operating and Commercial) and Finance: the other members are the Chief Executive Officers for new works and parliamen-

tary business, a Legal Advisor, and a Secretary. Its general organisation in most cases is the same as that of the Great Western Railway.

The capital of the Company is £413,778,857, it owns 16,876 miles railway. It has 7688 engines, 70,215 carriages, and 276,259 wagons.

Southern Railway—The Southern Railway was formed by amalgamating 5 constituent and 14 subsidiary Companies. Originarily promoted as the London and Southampton Railway in 1831, the London and South Western Railway was opened from London to Southampton in 1840. From early days the L. and S. W. Railway had closed associations with the Southampton Docks, and they were taken over on 1st November 1892. The London and Brighton Railway was incorporated in 1837 and was completed between those places in 1841. The South Eastern included two of the oldest railways in the south of England, the London and Greenwich, opened in 1837, and the Canterbury and Shitsable, opened in 1830. The Southern Railway serves practically the whole of the South of England. It is pre-eminently a holiday line and also caters for a huge London suburban population. Before the amalgamation all the constituent Companies did much to develop their own Continental services, which have since 1923 been further developed without overlapping. The electrification policy first inaugurated in 1909 by the L. B. and S. C. Railway has now been so far extended that the Company has the greatest electrified suburban service in the world. Electrification was extended to Brighton and Worthing from 1st January 1933, and to Eastborne and Hastings from 7th July 1935. Pullman cars are extensively used.

The general administration is the same as in other systems. The Company has organised Constituent Offices in Paris, Calais, Boulogne, Brussels and Cologne. The capital of the Company is £161,790,003 and it owns 5412 miles of Railway line. It has 1817 locomotives, 26,704 carriages and 32,971 wagns.

Railway Clearance in United Kingdom performs the work now done in India by the Indian Railway Conference Association and the Clearing House. It was established in January 1842, and was incorporated by Acts of Parliament in 1850 and 1897. It clears the through traffic of railways in Great Britain, and also traffic with certain Irish Railways and ports. Its affairs are managed by a committee of four representatives from the Board of each of the amalgamated Companies in Great Britain, and one from each of

the remaining railway Companies. In addition to the division of receipts from through traffic, etc., the Clearing House deals, by means of conferences of railway officers, with important questions of policy affecting the Companies generally. The work of the Clearing House is necessarily split up and divided amongst different departments, *viz.*, the Secretarial, the Merchandise, and the Coaching. The Merchandise Department apportions month by month the receipts from the carriage of all "through" goods. This department also deals with compensation claims, bad debts, and amounts in dispute. The Coaching Department superintends the division of all through traffic by passenger train. The work of number takers of wagons and sheets and the settlement of demurrage accounts are part of the operations of the Secretarial Department.

SECTION 2.

Canada.

There are two principal Railway Systems in Canada, the Canadian National Railways and the Canadian Pacific Railways both under the control of a Central Board. The interests of both these Companies extend beyond the Canadian border, the first possessing 1,889 miles of line in the United States and the second 5,160 miles. These Companies also own a number of hotels and ships.

The controlling body which supervises both the systems is the Board of Railway Commissioners known as Commission whose head quarters are at Ottawa. The Board of Railway Commissioners is composed of 6 members, appointed for a term of 10 years by the Governor-in-Council. They may be removed at any time by the Governor-in-Council upon address by the Senate and House of Commons. They are eligible for re-appointment, but cease to hold office upon reaching the age of 75. One of them is appointed by the Governor-in-Council as Chief Commissioner, and another as Assistant Chief Commissioner, and these must be or have been either judges of a superior court, or lawyers of at least 10 years' standing. No special qualifications are laid down for the other Commissioners. The Chief Commissioner receives a salary of £12,500 a year, the Assistant Chief Commissioner, £9,000, and each of the other Commissioners £8,000. The Board has full jurisdiction to hear and determine all matters, whether of law or of fact, and has the full powers, rights and privileges of a superior court.

An appeal lies from the Board to the Supreme Court only on a question of jurisdiction, but an appeal can also lie, by leave of the Board, on a question of law. The Governor in Council may at an any time vary or rescind an order or decision of the Board, but such power has been rarely, if ever, used.

Tariffs are fixed by the two Companies with the approval of the Commission. In the case of conflict the Commission determines what the common tariff shall be. The companies must apply the same tariff schedule to all users. They must furnish certain services free or at reduced rates to members of the Government, railway employees, soldiers, journalists and charitable organizations. They must also undertake the mail service.

In the matter of rates and fares it decides all questions of preferential treatment and discrimination and prescribes the classification, which is uniform throughout Canada. The Board takes the place of Inter-State Commission of the United States.

The Canadian National Railways.

The Canadian National Railways as such were incorporated in 1919. The parent company, the Canadian Northern, now part of the whole system, was authorised in 1918 to be operated under the new title. In 1923 the Grand Trunk Railway Company of Canada and the Canadian National Railway Company amalgamated under the latter name, and as the Government had previously taken over control of both the lines, the new system was Dominion-controlled from the outset.

Following upon the consolidation of many lines into the Canadian National system in 1923, the Railway has been well administered, and has deservedly won approval by its success in wielding together the various working forces of the separate companies in the consolidated system. The Head Office of the National Railway is at Quebec. It runs 23,68$\frac{1}{7}$ miles and its gauge is the European gauge of 4ft. 8½ in. The head of the administration is called President. There are four Vice-Presidents incharge of Traffic, Purchases and Stores, Finance and Accounting, and Maintenance and Operation.

The work is divided into various branches as in other countries. The audit and accounts are under one Comptroller, and the legal department is organised under a Chief Counsel who is assisted by a General Counsel, a Commission Counsel, 3 Regional Counsels, 3 Attornies, and 5 Solicitors.

Canadian Pacific Railway.

The promise of railway construction formed an integral part not only of the Confederation arrangement of 1867, but also of the terms upon which Prince Edward Island and British Columbia later entered the Dominion. The agreement to connect British Columbia with Eastern Canada by a railway from the Pacific Ocean was fulfilled by the building of the Canadian Pacific Railway. Failing to interest private capital in this project the Government undertook the work as a public enterprise. Later, a syndicate, which afterwards developed into the Canadian Pacific Railway Company, entered into an agreement with the Government to construct this trans-continental line in ten years, *i.e.*, from 1880 to 1890. The agreement provided that the country should subsidise the Company by a gift of twenty-five million dollars, twenty-five million acres of land and of the railway lines already constructed with public moneys at a cost exceeding thirty-seven million dollars. The system quickly expanded, absorbing a number of small railways. The Company runs 17,288 route miles of 4 ft. 8½ in. gauge. In addition the Company controls separately operated subsidiaries in the United States of 3,945 miles

During the Great War the two systems got into grave financial difficulties and a Royal Commission was appointed to investigate the whole situation, particulary in view of the large guarantees given by the Dominion and Provincial Governments. The principal recommendations of the Commission in the Report which it made in 1917 were that these undertakings were unable to maintain an independent existence and that they should be transferred to the Government, which alone could carry the burden. They recommended that a new public authority, a Board of Trustees, should be formed, to which the Canadian Northern, the Grand Trunk, the Grand Trunk Pacific, the Inter-colonial and the National Transcontinental Railways should be transferred, and by which they would be operated as a united system on a commercial basis, and that the Government should assume responsibility to this new authority for the interest on the existing securities of all these undertakings. The Commission laid stress on the point that this Board of Trustees should be non-political, permanent and self-perpetuating. It may be remembered that the two Canadian systems of Railways enjoy special patronage of the two political parties in Canada. This scheme of amalgamation was however not accepted by the Government.

The constitution of the Canadian National Railways did not follow the lines proposed by the Commission, and in place of trustees, a Board of Directors was constituted. These Directors are

nominated by the Governor-in-Council and may not be less than five nor more than fifteen in number. The estimates are placed before the Board and approved by them. They are then presented to the Minister of Railways and Canals. The Minister is already aware of their main provisions owing to the presence of his Deputy Minister on the Board. Finally, they are presented to Parliament and are examined in detail in Special Committee. The deficit on the results of the year has to be paid out of the Consolidated Revenue Fund.

In the year 1931, a Royal Committee was appointed to enquire into the working of these Railways and the method of co-ordinating various forms of transport. The Commission considered the possibility of the amalgamation of the two lines and also of leasing out the National Railways to Canadian Pacific Railway Company for a short or a long period, but it rejected both these alternatives and recommended that :—

(*i*) the identity of the two railway systems should be maintained ;

(*ii*) the management of the National Railways should be emancipated from political inrerference and community pressure ;

(*iii*) machinery should be provided for co-operation between the two systems for elimination of duplicate services and facilities and the avoidance of extravagance ;

(*iv*) a scale of economies which would bring the burdens of the National System within reasonable dimensions and effectively check extravagant and costly operation should be attained ; and

(*v*) reasonable protection should be given to the privately-owned undertaking against arbitrary action by the publicly owned undertaking which might unfairly prejudice the interests of the former.

The Committee made further recommendations about the constitution of trustees, budget and audit, co-ordination between the two Railways and constitution of the Arbitral Tribunal to settle differences between the two railways.

Three trustees should be appointed by the Governor in Council in whom should be vested all the powers of the present Board of Directors of the Canadian National Railways, both in respect of the parent and all subsidiary corporations of the System.

Senators and Members of the House of Commons and persons holding, or having within five years held, office or place of profit under the Crown in the Dominions or one of the provinces of Canada, should be disqualified for appointment.

The annual budget of the railway should be under the control of the trustees. Amounts required for income deficits, including interest on railway obligations, for capital and for refunding, should first be submitted to the Treasury Board for its approval and presentation to Parliament by the Minister of Finance.

A continuous audit of the accounts of the System should be conducted by independent auditors appointed by Parliament from a list or panel drawn up by the trustees and they should make a report to Parliament, calling attention to any matter which in their opinion may call for remarks.

While the responsibility for the direction and control of the System should be laid upon the chairman and his associate trustees, provision should be made for the post of Chief Operating Officer, with the titular rank of President. Under his care should be placed the entire working of the Railway in detail. The exact extent of his authority should be covered by regulations or by-laws to be made by the trustees. The President should be appointed by the trustees and should be responsible to them and not directly to the Government or Parliament.

For the purpose of settling disputes and in particular, disputes concerning the desirability of any co-operative measure or arrangement or course of action and for the settling of details of any scheme giving effect thereto and for determining the conditions thereof—an Arbitral Tribunal should be set up for each occasion. The Arbitral Tribunal should be composed of the Chief Commissioner of the Board of Railway Commissioners and one representative from each of the two railways

At the request of either railway and upon it being shown to the President of the Exchequer Court of Canada that the matter is of major importance, two additional members may be appointed by him to the Arbitral Tribunal for the occasion.

SECTION 3.

South African Railway.

The first railways constructed in South Africa were 4 ft. 8½ in. gauge lines which were opened—2 miles in Natal in 1860 and 57

miles from Cape Town to Willington in 1863. These lines were private enterprises, but in 1873 and 1877 the Cape and the Natal Governments purchased them, and by 1881 had converted them to 3 ft. 6 in. gauge which since then has been the standard. Expansion quickly followed the opening up of the Kimberley diamond fields, until in 1910, when the various systems were amalgamated and taken over by the Union Government, the mileage totalled 7,041.

The railways of the Union are administered on business lines. As far as possible, the total earnings should not exceed the amount required to meet the necessary outlay for working, maintenance, betterment, depreciation, and interest payments due on capital, not being capital out of railway or harbour revenue. This rule, which is of primary importance for the financial and tariff policy of the South African railways, dates back to the law of 1909. The railways do not make any contribution to the public budgets, as they are not run as a profit-making concern but to develop the territories of the Union. The railways do not collect any taxes for the State. They are paid for carrying the mails and in 1929 received £196,863 on that account.

Although the gauge of the line is only 3 ft. 6 in., the saloons have the convenient width of 9 ft. 3 in. The vehicles are carried on three bogies, the central bogie supporting two ends, forming the articulation. On 1st February, 1934, the Union Government assumed complete ownership of Union Airways, a commercial aviation Company which, for four and a half years, had operated, under Government contract, regular services between Durban and the Rand.

According to the Law of 1909, the administration of railways and harbours was handed over to a board of 3 commissioners with the Minister as chairman. The Commissioners were to hold office for 5 years but could be re-appointed. The board was advisory to the Minister. The earnings were to be so regulated that it should just pay the expenses.

Railways were administered by the General Manager who was responsible to the Minister. Appointments were often made by the Minister contrary to the recommendations of the General Manager. The system was freely criticised. "Under the present system," said Mr. Frankels "a Minister of Railways (usually not a Railway expert) represents the interests of the Government generally rather than those of railway transport, and a political Board ratifies his decisions whilst the only expert representative of railway interests is the General Manager, already over-burdened with executive duties. Under such a system, the Administration of the Railways on com-

mercial principles becomes impossible." The system was altered by the Act of 1924. Under the new system the Commissioner was to be appointed by the Governor-General whose salary was fixed at £ 2,500 per annum (£90 per annum=Rs. 100 per month). He had a Deputy Commissioner and a Secretary. The law also provided greater security for Railway servants. No employee was to be liable to dismissal or any disability for refusing to work on any Sunday except in cases of necessity. It established a board of appeal consisting of 10 members, *viz.*, (1) a Police Magistrate appointed by the Governor in Council, (2) four representatives of employees representing 4 divisions of State, and (3) five officers, namely, the Chief Mechanical Engineer, the General Traffic Superintendents of the three divisions, and the Engineer in Charge of Maintenance, signal and light, the police magistrate, an officer *not* of relevant branch, and a nominee of employees of the same branch to form the quorum. The Police Magistrate is the chairman. Vakils and agents of all parties are permitted. Decision of the board is final except in the case of dismissal when an appeal can be made to the Commissioner.

The capital expenditure stood at about 168 million sterling and the system has 15,700 miles of Railway lines including sidings.

SECTION 4.

Australia.

The Common Wealth of Australia or Central Government owns and maintains a system of Railways and each of the 6 Provinces has its own system governed by provincial Acts. There are thus the following seven systems of Railways :—

(1) Commonwealth, Government Railways (2114 miles)

(2) Queensland Government Railways (6167 miles)

(3) New South Wales Government Railway (6164 miles)

(4) Victorian Government Railways (4,599 miles)

(5) South Australia Government Railways (1,451 miles)

(6) Western Australian Government Railways (4,359 miles)

(7) Tasmanian Government Railways (634 miles).

The Common Wealth Railways consist of four systems extending over a distance of 2,144 miles, half of which has European gauge 4 ft. 8½ inches and the gauage of the remaining half is 3 ft. 6 in. This railway can be favourably compared with the important trunk lines

of other countries. It is noted for the spaciousness of the Lounge and sleeping cars and for other novel features in railway travel, such as a piano in the lounge and the bathrooms in the first-class sleeping cars. There is also good sleeping accommodation for second-class passengers. Crossing the Nullarbor Plain the line runs for over 300 miles without a curve, probably the longest stretch of straight line in the world. The Central Australian and North Australian Railways traverse sparsely populated territory, and although the volume of business is not great, they are essential to the pastoral and mining industries in the extensive tracts of the country which they serve. Unfortunately no general plan was drawn up in the initial stages of railway development, with the result that each State constructed its own system without considering its neighbours' interests, and adopted the gauge which appeared most suited to its requirements regardless of the importance of adopting the same gauge as other States. On the line from Brisbane to Perth, for instance, the gauge changes five times. Even tariffs are not uniform and are altered with a view to attracting traffic to the State capitals. Freight on wheat from Wagga to Sydney (325 miles) is 17s. 4d., whereas from Wagga to Melbourne (269 miles) it is 25s. 8d.

At the head of administration in the Central and Provincial railways is a Commissioner for Railways who has under him officers in-charge of separate branches of work. These branches are :—

(1) Traffic. Goods traffic is not separated from passengers traffic and there is no separate Commercial Superintendent.

(2) Accounts. In Commonwealth Railways, the Comptroller of Accounts and audit is the same person while in some provincial Railways, Queensland and Victorian, Comptroller of Accounts is separate from the auditor.

(3) Ways and Works under Chief Civil Engineer.

(4) Rolling stock and workshops under Chief Mechanical Engineer. Queensland has separate stores branch; traffic and Engineering branches have section officers who are called District Superintendents. Some of the Railways have a Board of Commissioners who are responsible to the Parliament through the Minister of Railways.

The Railway Commissioners are not, however, the constructing authority. Railway construction is undertaken by the Boards of Land and Works which are also responsible to the Parliaments of their respective States. For purposes of transportation, the Com-

missioners act as common carriers and are subject to the obligations and entitled to the privileges of such carriers.

The Railways are State owned and, as such, their rights in general are those of a Government department, except where they are specifically laid down in the Railways Acts. The capital invested in the railways is derived from State loans and revenue funds. Interest payments and the payment of sums due by the railways are secured by the consolidated revenue of the State. No Commissioner is permitted to participate in the profits of any contract, nor can he take any Commission or discount in any undertaking.

The Railways in Australia had been running at a loss and the accounted deficit in 1932 was about 75 million sterling.

The Premiers of Australia in a conference held on 4th February decided to convene a special conference to suggest ways for co-ordinating the activities of various railway systems and other methods of transport and also to find the cause of the deficits in the Australian Railways. The special conference was convened under the chairmanship of Mr. Heath and it recommended.

(1) Political control of railways in whatever form to be removed. Unless this is done, it is useless to expect that the rehabilitation of railway finances will be realized.

Railways are of such vital importance to the economic life of this country that it is essential that the management should be representative of the best brains of the community, and should be able to direct its energies, untrammelled by outside interference.

(2) There is outstanding necessity for drastic reduction in the number of authorities controlling industrial conditions.

(3) This country is over-supplied with transport facilities.

The situation demands the wise co-ordination of conflicting services with the object of eliminating wasteful duplication.

(4) The railways are largaly over-capitalized. The financial statements as now prepared do not disclose the true results of operation. The Capital Account should at once be placed upon a proper basis, subject to the conditions already stated.

(5) The financial result of railways which are constructed for development purposes should be entirely separated from the general railway finances.

(6) Co-ordination between the systems cannot proceed very far until there is a wider outlook than that of State boundaries. In order to ensure co-ordination and the elimination of overlapping a body with plenary powers is necessary.

In Queensland, there is a Committee of 10 persons to hear the appeals of subordinats, five of whom are Railway officers from five branches, four representatives of Employees elected from each Division and a Police Magistrate. Appeals are first heard by a Committee of 3 persons, a police Magistrate, an officer not belonging to the department to which the officer belongs and a representative of the Employees of the same branch. The board may upset the findings of the appellate committee and its decision is final except in cases of dismissal which may be referred to the Commissioner. The enquiries are held in open courts. The system is analogous to that in South Africa.

SECTION 5.

French Railways

In 1823 the first concession for the construction of a railway between Saint-Etienne and Andrezieux was granted by Royal Ordinance. In 1826 a concession was granted for a line between Saint-Etienne and Lyons, and between Andrezieux and Roanne in 1828. Progress was slow at first, but certain measures like the law of 1842 under the July Monarchy, the encouragement given to the railways under the Second Empire, and the big schemes drawn up by M. de Freycinet under the Third Republic, made possible the development of the French railway system. All the principal railways in France converge on Paris, so that the railway system as a whole is very centralized.

The French Railways are operated under a system combining private enterprize and State Control. The Railways that are run by the Companies are the following five systems.

(1) Chemins de fer de L'Est (Eastern Railways)

(2) Chemins de fer de Nord (Northern Railways)

(3) Chemins de fer de Paris, a Lyon, at a la Mediterrane (P. L. M.)

(4) Chemis de fer de Midi (Midi Railways).

(5) Chemins de fer de Paris a Orleans (Paris Orleans Railway).

The last two are worked by a joint administration. These companies are commercial enterprises with share and debenture capital. State Railways include two systems :—

(1) Chemins de fer de L'Etat Francais (French State Railway)

(2) Chemins de fer d'alsacee de Loraine d'alsacee and Loraine Railway)

The obligations of the railways are laid down in a series of legislative measures introduced at different times between 1842 and 1932. A decree was issued re-organizing the State control of railways, and the conditions of operation stipulated in the concessions (cahiers des charges) or conventions accepted by the companies. There are three classes of obligations ; technical, commercial, and financial.

(1) Technical obligations :—The lay-out of the railway lines construction work, and alterations of all kinds must be approved by the Administration. Rolling stock is controlled by the Public Authorities.

(2) Commercial obligation :—The railways must maintain a regular service and are subject to the general obligation to carry goods and passengers. Tariffs are fixed by the Cahier des Charges. The railways are compelled to grant reduced fares to certain users as follows :—

(*a*) soldiers and sailors ($\frac{1}{2}$ fare) ; (*b*) inspecting officials (free), (*c*) postal officials (free), (*d*) prisoners and their guards ($\frac{1}{3}$ fare) (*e*) reductions to large families and war-wounded. The Companies are obliged to carry the mails. All these obligations have been considerably extended during recent years.

(3) Financial obligations:—Under the system introduced in 1921 the railways bear one-fifth of the initial cost of new lines. They must pay any surplus they may have into the joint fund. They are obliged to issue loans on behalf of the State when required, in order to cover certain expenditure for which the State is responsible. They may not issue loans without authorisation. The type of security to be issued is decided by the Administration.

The organistation of all the French Railways (Company and State) is governed by the convention of 28th January 1921 and law of October 1921. Under this law each railway retains the

right to organise and operate its own system subject to the control of (1) a Committee of Direction (2) *Counseil superieur des chemins de fer.*

The former includes only representatives of the Companies three from each Company, making 18 members in all. Its aim is to co-ordinate the management of the systems ; and the particular objects to which it devotes its attention are co-ordination in technical matters, standardisation of material, rules for the division of traffic and exchange of rolling stock, rules of working, and the consideration of modifications required in the statutes regarding conditions of work, pay and pensions. A Government Commissioner attends all the meetings. He can demand that any question which he considers appropriate should be placed on the agenda, summon a meeting of the Committee, or ask for a second discussion on any subject, the first decision on which appears to him to be opposed to the public interest. Decisions are taken by a majority, each railway system having only one vote. The railway to which the Chairman of that particular meeting belongs has a casting vote. Decisions, when taken, are binding on all the systems. Its functions are similar to those of the Railway Conference Association in India. The Committee of Direction provides an uniform control by experts over all the railways on technical matters.

The Superior Council consists of 60 members made up as follows:—

(*a*) the 18 members of the Committee of Direction.
(*b*) Two representatives of the staff from each of the 6 systems, nominated by the Minister of Public Works.
(*c*) 30 persons representing general interests of the country appointed by decree on the proposal of the Minister of Public works.

In addition there is a Chairman appointed by decree on the proposal of the Minister. The Director of Railways at the Ministry attends meetings as Government Commissioner.

This Council is primarily an advisory body but in certain cases it possesses executive powers. The Minister has to place before it all questions, technical, commercial, administrative and financial, which affect all the systems, and he may, if he thinks fit, place before it any important question which affects one or more.

The Minister cannot take a decision contrary to the advice of the Superior Council until after that body has deliberated the question a second time. In the same way the Committee of Direction can demand a reconsideration by the Superior Council if it considers that any resolution of the Council or decision of the Minister is opposed to the interest which it is its duty to protect.

One of the questions on which the Council is recognised as having executive power is that of tariffs, and particularly of "raising tariffs in such measure as is necessary to re-establish the balance between receipts on the one hand and expenditure and loan charges on the other." Increases in tariff are proposed by the Superior Railway Council for the final approval of the Minister of Public Works. Increases in tariffs will have legal force if the Minister of Public Works, after consulting the Minister of Finance, does not object to them within a month.

A peculiar feature of French Railways is the establishment of a common fund in which the surplus profits of the prosperous railways are deposited and from which the deficits of less prosperous ones are made good.

The organization and the mode of administration of the 7 Railways are about the same. Each Railway has a Board of Directors consisting of President, two or more Vice-Presidents and about 20 Members who are called administrators. The State nominates two Directors different for different Boards.

The management is entrusted to the Director-General who has under him a Deputy, two Chief Engineers, a Chief Accountant, a Chief in-charge of personnel, and a Chief Inspector

The management is carried on under the following departments :—

1. Permanent Way.
2. Rolling Stock.
3. Traffic and Operation.
4. Accounts and Statistics.
5. Tariffs, Commercial affairs, and Publicity.
6. Compensation and Claims.

The route miles and other details are given in the appendices 1, 2 and 3.

The seven Company and State Railways are brought under one common control by the convention and decree of 31st August 1937. According to this law, the terms of contract of all the Company managed railways expire on 31st December 1955 when all these railways will be taken up by the State. The law also created a National society of French Railways, which begins to function immediately, and it will begin to administer the Company railways on behalf of the State from 1st January 1956.

Few important provisions of the law of 1937 are described below :—

Art. 1. A National Society of French Railways is hereby created.

Art. 2. The Society is exempted from the obligations put on other Companies.

Art. 4. The terms of working of Company railways are extended to 31st December 1955.

Art. 5. The State has transferred the management of the two State Railways to this society from 1st January 1938.

Art. 7. (Of the convention) creates a council of administration of the society which will consist of 33 members till 21st December 1955 and 27 members thereafter.

Till 31st December 1955, 12 members are nominated by the council of administration of 6 Companies, two by each Railway. After the expiry of their terms of contract these 12 members will be replaced by 6 members nominated by the Minister of Public Works Department from different categories.

Art. 8. The members hold office for 6 years.

Art. 9. A *comite de direction* of the society is created consisting of the President of the Council of Administration, the two Vice-Presidents and 8 other members.

Art. 10. Prohibits the members from taking pecuniary interest direct or indirect in the business dealing with the Railways.

Art. 11. Creates a commissionaire of the Government consisting of the Director General of Railways and Transport, Minister of Public Works Department, and President of the Council of Administration to supervise the finances.

(UNION INTERNATIONALE DES CHEMINS DE FER)

(OR INTERNATIONAL UNION OF RAILWAYS.)

Address : 10 Rue de Prony, Paris.

The International Union of Railways of which the four British groups are members, was promoted in response to a wish expressed at the International Economic Conference at Genoa in April and May 1922, that the Administrations of the French Railways should convene, as early as possible, a conference of technical representatives of the railways of Europe and of countries in rail

communication therewith, with a view to taking the necessary measures for the re-establishment of International traffic in a manner at least as satisfactory as before the war.

A conference was held in Paris in October 1922 at which it was decided to found an International Union of Railways The Union forthwith came into being, the bodies through which it functions being as under :—

1. The General Assembly :—The General Assembly, which normally meets every three years, is the final authority of the Union, and all Member-Administrations of the Union are represented thereon. The British Railways are represented by delegates appointed by the General Managers' Conference.

2. Board of Management :—The Board of Management is the executive authority of the Union, and has powers to act in certain cases without waiting for the authority of the General Assembly. The Reports of the various Committees are submitted to the Board and passed on by them to the General Assembly as necessary.

3. Committees :—There are five committees.

(*a*) the Passenger Traffic Committee,

(*b*) the Goods Traffic Committee,

(*c*) the Accounts and Exchange Committee,

(*d*) the Exchange of Rolling Stock Committee, and

(*e*) the Technical Questions Committee.

These committees submit their reports and recommendations to the Board of Management. The work of the Union is confined to the study of administrative and technical questions, and it takes no active part in railway management, working or construction. Decisions taken by the General Assembly are submitted for the approval of the various Governments in cases where the railways are State-owned, and to the individual Companies where the railways are not owned by the State.

The Union publishes every year a report containing statistics of nearly all the Railways in the world.

SECTION 6.

Germany.

Experiments in railway construction in Germany date from about 1825. As early as 1826, Fritz Harkort, a Westphalian manufacturer, tried to promote a scheme of railway construction, but at first he was unsuccessful, and it was not until 1838 that the Elberfield-Dusseldorf line was constructed in that region. In the meantime other German countries had started work; in 1835 the line from Nuremberg to Furth, in Bavaria, had been opened. In Saxony the first section of the Leipzing-Dresden line was opened in 1839, and extended in 1840 as far as Magdeburg. About the same period the Prussian Government authorized the opening of the line from Berlin to Potsdam (1839), and later the line from Berlin to Anhalt and Coethen (1841). In 1838 the Prussian law, although placing the railways in the hands of private companies, formally laid down the principle of State authorization and State supervision of constructional work. Nevertheless, the idea of direct operation of the railways by the State gained further supporters every year.

The constitution of the German Empire formed in 1871 after the German-Franco War recognised the right of the Reich to supervise the railways and regulate rates. Bismark centralised all the railways belonging to various States.

In 1908, the private railways were purchased by constituent States and the ownership of private companies ended, but Railways continued to be run by each constituent State and they were directly under the Minister of Public Works Department. In the year 1914, Germany had 63,794 km. of which 7,868 km. were given up to allied countries.

In the year 1920, Germany had only 53,560 miles Railway lines whose ownership was divided among 8 constituent States :—

		kilometres
(1) Prussia	...	34,433
(2) Byren	...	8,526
(3) Saxony	...	3,370
(4) Wurtenbery	...	2,156
(5) Baden	...	1,899
(6) Hessen	...	1,307
(7) Mechlenburg	...	1,177
(8) Oldenberg	...	681
Total	...	53,560

In 1919, under the Weimar Consitution, the separate State railways were amalgamated under the Central Government, and on

11th October 1924 the German State Railway Company was constituted by virtue of the Railway Act of 30th August 1924, and amended by the Act of 13th March 1930. It possesses the exclusive right of operating the State Railways. The real estate and plant, including vehicles, of the State Railway remain, as "Reicheisenbahnvermogen," the property of the State.

When the Dawes Committee was appointed in 1924 to examine the problem of reparations in Germany, one of its most important duties was to assess the amount of the reparation indemnities which could be paid by Germany. The Dawes Committee sought the assistance of Sir William Acworth and under his advice German State Railway Company was incorporated to operate State railways on behalf of the State A Board of Management was established to administer the Company. It consisted of eighteen members of whom nine were to be appointed by the Government and nine by the Trustees appointed by the Reparations Commissioners. Five of the latter had to be of German nationality. Clauses were inserted so that four of the seats on the Board filled by Government appointment should be assigned to the preference-shareholders later.

The members of the Board had to be business-men of experience or railway experts; they were not allowed to be members of a Parliament of the Reich or of any of the German States. The term of service was for six years, with eligibility to re-election on retirement, three members retiring every second year. The President of the Board had to be a German and had to be elected every year by a three-fourth majority of the Board voting. The management of the Company's affairs, subject to the control of the Board, was to be entrusted to a Directorate.

The society was not established according to the Company's Act. It was a society to run the State-owned railways for the State. The following sections of the statutes are interesting:—

Section 2. The society will carry on its work in the interest of German economical and commercial development. The society will put in the first rank German national economic interests, German trade and commerce. It will not allow either of them to suffer. *Section* 3. It will have a capital of 15 milliard gold Marks, 13 milliard of ordinary shares and 2 milliard of preferential shares. *Section* 4. The Government would pay 660 million gold Marks in Reparation, 55 million each month. This charge ranks immediately after the working expenses and before any other expenditure such as Reserve Fund. *Section* 5. The Government hands over the administration of Railways to this Board up to 31st December 1964, and by that time reparations will cease. *Section* 8. The Government had a right to

take loans payable on 1st January 1965 on the security of Railway property. *Section* 9. The Board is bound to look after the safety and comfort of passengers. New lines cannot be built without the permission of Parliament. *Section* 10. The Board is free from all taxes. *Section* 12. Railway servants are not State officials. *Section* 19. The organs of the Board are Verwaltingsrat and Vorstand. *Section* 20. The workmen and officers as far as possible should be of German nationality. *Section* 36. The Board cannot enter into relation with other countries except through the Government.

The duties of the Board of Management (Verwaltingsrat) were :—

(1) to appoint Director General.

(2) to appoint other higher officials on the recommendation of Director General.

(3) to pass Balance Sheet.

(4) to decide the amount of dividends.

The President of Verwaltingsrat is the sole medium of communication between Railways and the Government. The Government appoints a person to watch the proceedings of the Board. Like the Director General, he can take part in discussion but he has no vote.

Vorstand or Board of Directors has 4 Sub-Committees :—

(1) The Executive Committee, consisting of the President, the Vice-President and 4 other persons.

(2) The Finance Committee.

(3) The Tariff Committee.

(4) The Technical Committee.

The President of the Board in called the Director General. He can attend the meeting of any Sub-Committee.

The Board of Directors consists of the Director General, his permanent Deputy, the heads of the four departments and the District Manager in Munich. The four departments are (1) Traffic, Rates, Fares, (2) Operating and Civil Engineering, (3) Mechanical Engineering and Purchase of Stores, and (4) Finance and Law. There exists a fifth department dealing with staff questions but its head is not a member of the Board of Directors. There are 27 divisions acting directly under the Board of Directors without the intermediary agency offices. The administrative head in a division is called the President and he has a Vice-President under him.

Germany recognised that the rates and fares should be judged from an economic standpoint and she first passed statutes by which the Government ceases to be the sole arbiter; and it introduced the right of appeal to a court against the decision of the Government.

The length of the route of German Railways is now 78,775 kilometres. Several sections of the main and local lines are electrified, the former operating at 15,000 volts A. C. 16 2/3 cycles, and the latter mostly at 800 volts D. C. Progressive accelerations of train services are being effected, and on 15th May 1933, the high speed diesel-electric express, the "Flying Hamburger", was introduced between Berlin and Hamburg. Similar services have been extended to most of the principal main routes between Berlin and the Provincial cities.

The route mileage of German Railways is about the same as in India and they are all administered as one unit under Divisional organizations. (German route kilometre = 78,775; Indian route kilometre = 75,774).

SECTION 7.

Belgian Railways.

The economic life of few countries is as closely bound up with the railway as that of Belgium. The Belgian railway system is densest in the world and represents 36·5 km. per 100 sq. km. of country. Luxemberg which is next in order after Belgium has only 21·2 km. per 100 sq. km. of country. The first line was opened in 1835 between Brussels and Malines. The railways were first constructed by the State, but in 1844 complete revulsion of feeling took place and private companies were encouraged to construct, run, and manage new lines. The total length of the line is 11,090 km. (6,875 miles) of which 4,823 km. are of general interest. After Franco-German War, the State began to purchase the line and in 1914 when the Great War broke out the Belgian Railways were State-owned and State-managed. This State of affairs continued till 1926 when the Government created a new company called "*Societe Nationale des Chemins de Fer Belge*".

The capital of the Company thus formed consists of 10 million ordinary shares of 100 francs each and 20 million preference shares of 500 francs each. The whole of these shares, amounting to a nominal value of 11 milliard, was handed over to the Belgian Government. The ordinary shares must by law be retained by the

State. As each of these shares has one vote whereas there is only one vote to 10 preference shares, the final control of the undertaking is thus ensured to the Belgian State irrespective of what may happen to the preference shares.

The preference shares, which were handed over to the Government by the Railways, were in turn issued by the Government to the public in such amounts as the Government thought fit. Fixed amount of interest on these shares is paid by the Government and is not a charge on the Railways.

The Company is administered by a Board of Directors consisting of 21 members who appoint a General Manager. This Company is supervised by six Commissioners, three of whom are appointed by the Chamber of Representatives and three by the Senate.

The State has granted the Company the right to operate the railway lines for seventy-five years, but retains ownership of the system.

Members receive a fixed salary of 1,000 francs a month and must retire on attaining the age of 66. No minister or member of either Legislative Chamber can become a member of the Board till 2 years have elapsed since he surrendered his office or seat.

The Minister of Railways, if he sees fit, can attend meetings of the Board. In that event he acts as chairman and has a vote.

The balance sheet and profit and loss account after they have been passed by the General Meeting, must be submitted to the Legislative Chambers, but these bodies have not the right either to approve or reject them. The accounts are inspected, however, by 6 Commissioners, 3 of whom are appointed by the Chamber of Representatives and 3 by the Senate. Nevertheless, the Government will always have the right to insist on rates being lowered or to forbid their being raised.

The decision of the Society will require the approval of the Ministers in the following cases :—

1. Alienation, acquisition or exchange of property if the value exceeds one million francs.

2. All contracts exceeding 500,000 Fr. No extension of Railway line is permissible without an Act of the Legislature.

Day to day administration is carried on by a Director General and five other Directors working under him.

1. The Director of Exploitation who controls transport, personnel, commercial, traffic, and control of receipts.

2. The Director of Material Transport controls repairs of rolling stock, electric and other workshops.

3. The Director of Ways looks after repairs of permanent tracks, buildings and signalling.

4. The Director of Finance supervises accountancy, control of expenditure, general finance, statistics, purchase and sale.

5. The Director of Establishment attends to all personal affairs. Appeals are heard by him.

The Director General (General Manager) may attend the meeting of the Society (Governing body) only in an advisory capacity. He can take part in discussions but he has no votes. The Government is responsible for police arrangements and the safety of passengers.

The Belgian railways are divided into 7 divisions called groupes. Each groupe is controlled by a board consisting of a Superintendent (President) and three representatives of Exploitation, Material and Ways. The other two Directors at the headquarters are not represented.

According to the Article 37 of the Statutes the Society or the Governing body is required to present a balance sheet and profit and loss accounts before the two Houses of Parliament. The following extract is taken from the report presented on 27th May 1938. "From 1926 till 1930 we had a period of boom and during this period the Society according to Art. 39 of the Statutes built up a reserve fund of 431 million Fr. But a period of depression set in at the end of 1930 and during the next years *i e*, 1930 to 1935 the Society sustained a loss of 648 million Fr. of which 431 were covered by the Reserve Fund. The situation, however, improved in 1935 ; but the railways have now to face the competition of automobile. The excess of receipt in 1937 over that of 1930 was 130 million."

SECTION 8.

Swiss Railways.

The Swiss Railways were first built by the French Company P. L. M. There was a great cry in 1903 that Swiss Railways are for Swiss people ; and the State, therefore, began to purchase them. The last one was purchased in 1909.

The stocks of the Companies were changed into Swiss State bonds at 3½ and 4 per cent and all debts were taken up by the Swiss Government. The country possesses in all about 5,400 km. and it is 1·35 per 1,000 of population. The most striking feature of Railway development in Switzerland in recent years is the marked progress that has been made in electrification. On completion of the first scheme, drawn up in 1923, 1,672 km. of the Federal System and 1,717 km. of private lines had been electrified, representing 62·5 per cent of all the Swiss Railways. Still further lines are to be electrified under the programme approved in 1929. This work has called for a great financial effort, the cost of the necessary installations amounting to S. Frs. 473,299,123 between 1907 and 1931. On December 31st, 1931 the electrical haulage equipment consisted of 441 locomotives, 12 tractors, and 44 rail-cars.

The Swiss Railways are generally regarded as one of the best State-managed systems. The railway budget is separate from the State budget and the administration is vested in a Council of Administration whose president is the Minister of Communications. The Council consists of 15 members, 13 of whom are mominated by the Cabinet of Ministers. The duties and powers of the Council, as fixed by the Act of 1923, are :—

(1) to supervise the administration.

(2) to scrutinise the budget before it goes to the Minister.

(3) to scrutinise new projects.

(4) to ratify important contracts.

5. to take notice of all the affairs that come under the jurisdiction of the two Houses of Parliament.

The heads of the departments, the Director General, and other Directors are appointed by the Minister on the recommendation of the Council but the Minister is not bound to follow the recommendation. Daily administration is carried on by the Director General and the two other Directors who hold office for a period of 6 years. The Swiss Railway system is divided into three divisions : Lausanne, Luzeren, and Zurich. There is a Council in each Division which is presided over by the Divisional Director appointed by the Council. Seven members of the Divisional Council are appointed by the Minister of Communication and the rest by the Provincial Government. The Divisional Director has full powers over the appointment and dismissal of all employees except the heads of departments. The functions of the Divisional Councils are advisory. The members of the Council of Administration and the Director General can attend meetings of the Divisional Councils. The

Board of Directors meet once a week and often if necessary. The Board has 12 different branches each under a chief. The income of Swiss Railways has undergone the same cycle as in other countries as will be shown by the following table :—

In million Swiss Franc.	Passenger Traffic.	Goods Traffic.	Total.
1929	156	225	401
1930	159	232	391
1931	151	222	373
1932	136	191	330
1933	135	189	324
1934	133	187	321
1935	126	187	303
1936	120	159	279
1937	133	190	323

SECTION 9.

United States of America.

The Railways in the United States are run by private companies. The immense railway system is the out-come of a long period of growth beginning as far back as the invention of the first railway, but the key-date in that long and crowded history is undoubtedly May 10th, 1869, when at Ogden, not far from Salt Lake City, Union Pacific Line from Omaha met the Central Pacific from San Francisco.

There are 1,459 companies operating in the United States of which 155 are first class railways whose gross earnings are more than one million dollars. These first class Companies are divided into three groups. They are owned and operated by private companies, but in practice they are controlled by Inter-State Commerce Commission, which was created by the Federal Government in 1887 by an Act. The number of members of this Commission is eleven and they are all appointed by the President of the United States with the consent of the Senate. The members hold office for seven years and they get 12,000 dollars per annum. The Chairman of the Commission is appointed from the members in rotation

and he holds office for one year. Not more than six members can be appointed from the same political party and comparatively few men have had previous railway experience and majority are trained lawyers.

The Commission's work is organized in 5 sections. Important cases are referred to the whole Commission. Appeals from the decisions of the Inter-State Commerce Commission go to the Supreme Court of the United States. The Commission supervise tariff and suspends or amends them. The Commission should give thirty days' notice for new tariff. To some extent the Commission's functions correspond to the powers exercised by the Railway Rates Tribunal, the Railway and Canal Commission, and the Ministry of Transport in Great Britain. The tariffs are not applied in the same way throughout the entire territory of the United States. The country is divided into three districts for tariff purposes: (*a*) the Official District, (*b*) the Southern District, and (*c*) the Western District. All transport operations between two points in any one district are governed by the tariff applicable to that district. Transport operations between stations in more than one district are subject to the so-called 'Official' District Rating. The limits of these Districts do not correspond with State boundries. The railways are obliged to undertake certain transport operations at reduced prices; transport of troops at 50 per cent and mails at 80 per cent of commercial rates. The advantages enjoyed by the Railways include, however, perpetual charters. No monopoly is granted to any Company.

The internal organisation of these companies differ according to the sizes and the old traditions. The operating ratios of these Companies have great variation and differ from 45 to 97 per cent and the average for entire system is 74·87. The operating ratio is smallest in medium size companies.

I take in illustration Atchison, Topeca and Santa fe Railway Company which is one of the biggest Railway Companies in the United States. Its total capital is 1·2 billion dollars or about 396 crores and it has 13,285 route miles excluding sidings. The Company possesses 1,757 locomotives, 1,501 carriages and 83,156 wagons and the operating ratio is 80·64 miles. In some Companies the offices of the chairman of the Board of Directors and President of the managing committee are combined in one person. Most Railways in the United States have Divisional system and there are 13 Divisions in this line each under a Divisional Superintendent, who has a Divisional Engineer under him. The Vice-Presidents are the heads of one or more branches of administration. In all railways, Goods Traffic Managers are separate from the Passengers Traffic Managers, and both have several assistants, managers and agents under

them. There exists a regular legal department. The General Council consists of a general solicitor and general attorneys, who look after the claims and other legal questions. This department does a good deal of work now done by the Chief Commercial Soperintendent on Indian Railways.

The Railway system in the United States is most gigantic. It covers 398,000 miles and the gross receipt of each year is over 4 billion dollars, which is 50 per cent greater than the total capital of Indian Railways. It has 14,683 locomotives, 21,532 carriages and 1,776,428 wagons.

Personal Observations

The position of Indian Railways is about the same as it is in France. Some railway lines are administered directly by the State and the others by Companies. The dual system is uneconomical. The acquisition of Company managed railways on different dates will unbalance the machinery of administration, each time a Company managed line comes under the State control.

We should follow the French methods and bring all the Company managed and Company owned lines under State management on one date as is done in France. This date of acquisition should be between 1951 and 1960. The terms of contract of all these Companies may be extended to this date. In the mean time, the State should purchase branch lines from smaller Companies and hand over their management to the Class I Railways of which they are feeders.

CHAPTER III.

SECTION 1.

General Administration of Indian Railways.

The Railways in India as mentioned in Chapter I were mostly constructed by various companies registered in England, but they were purchased by the State at various times A few branch lines were constructed by small Companies registered in India. The Indian States also contributed to the construction of Railways in their own territory. In some cases, the Government of India purchased the railway lines but allowed the Companies to work them under certain conditions described in Chapter I. There are at present the following categories of management.

(1) State owned lines managed by the State.

(2) State owned lines managed by Companies.

(3) Company lines managed by Companies.

(4) Company lines managed by State (these are small concerns).

(5) Lines owned by Indian States, some of which are worked by the States themselves, while others are worked by Companies.

There are at present 174 different undertakings which run the Indian Railways under varied conditions and no attempt has yet been made to amalgamate them (*vide* section 6). There are eleven class I railways of which N. W., E. I., G. I. P., and E. B. railways are managed by the State, one H. E. H. The Nizam's Railway by Hyderabad Government and the remaining six, *i.e* , B. B. & C. I., B.N. M. S. M., S. I., B. N. W., and A. B. railways by Companies. These Companies have their head-quarters in London. The Board of Directors of each Company has one representative of the Secretary of State for India who has the power to veto the decision of the Board. In actual practice the Secretary of State has appointed the same person to sit on the Board of each Company and he also holds a permanent appointment in the office of the Secretary of State for India.

The Railways form a distinct department of the Government of India of which the administration side is under the Communication Member and the financial side under the Finance Member of the Government of India.

The administration is actually carried on by a Board called the Railway Board and its President, the Chief Commissioner of Railways, has the status of the Head of a Department. He has direct access to

the Viceroy, but all official communications pass through the Communication Secretary.

The conditions under which the Government have allowed the Companies to work the lines owned by the State are :—

(1) When funds are required for further capital expenditure, the Government has the option either of providing them or of calling on the Company to provide them.

(2) All the contracts are terminable at the option of the Secretary of State, at specified dates; and on termination the Company's capital is repayable at par.

(3) The Company is bound to keep the line in good repair, in good working condition, and fully supplied with rolling stock plant and machinery; to keep the rolling stock in good repair and in good working condition; and to maintain a sufficient staff for the purpose of the line—all to the satisfaction of the Secretary of State.

(4) The Secretary of State may require the Company to carry out any alteration or improvement in the line, or in its working, that he may think necessary for the safety of the public or for the efficient working of the line.

(5) The train service is to be such as the Secretary of State may require. In order to secure a general control over the rates quoted by Companies, the Secretary of State has retained power to settle the classification of goods, and to authorise maximum and minimum rates within which the Companies shall be entitled to charge the public for the conveyance of passengers and goods of each class.

(6) The Company has to keep such accounts as the Secretary of State may require, and these are subject to audit by the Secretary of State.

(7) In all other matters relating to the line the Company is made subject to the supervision and control of the Secretary of State, who may appoint such persons as he may think proper for the purpose of inspecting the line, auditing the accounts, or otherwise exercising the powers of supervision and control reserved to him. In particular, the Secretary of State has the right to appoint a Government Director to the Board of Company, with a power of veto on all proceedings of the Board. All the moneys received by the Company in respect of the undertaking, whether on capital or revenue account, have to be paid over to the Secretary of State.

(8) All expenditure by the Company has to be submitted for the sanction of the Secretary of State.

Most of these powers are exercised by the Railway Board on behalf of the Secretary of State. Railway Board is responsible for the safety of passengers and it has appointed five Inspectors whose duty is to examine the track and the strength of the bridges In serious cases of accidents the Inspectors make the first enquiries on the spot.

The administrative machinery of the four railway systems managed by the State has not been altered. Each railway considers the other three as foreign railways. The Railway Board has taken the place of the Board of Directors. On account of its vicinity, knowledge of details and the necessity to reply questions in the legislature, their association is much closer than in the Company managed railways. Each railway system is a unit by itself and the co-ordination is done partly by the Railway Board and partly by the Indian Railway Conference Association described in section 7. The unit of administration is fixed on historic grounds. The administrative sphere of each Company as determined at the time of its formation is still maintained and no attempt has been made to amalgamate them as has been done in other countries. This involves unnecessary accountancy and increase in higher supervisory staff.

The Agent, now called General Manager, is incharge of each unit. The work in his office is divided into 6 branches (*vide* section 3) and each section is in the charge of a General Superintendent. The Agent, in company with the principal officers attached to his department, usually inspects the line and examines details at stations once a year or once in two years. Such a full-dressed inspection is very useful. It removes local slackness and gives opportunity to higher officials to come in personal touch with the subordinate staff.

In State Railways a further decentralisation has been introduced by organizing the divisional system, whose justification from the financial point of view has often been criticised (see section 4). Minimum and maximum rates are fixed by the Government of India within which each Railway adjusts its own tariff. The Indian Railway Conference Association has been attempting to simplify tariff and to introduce uniformity. It has not achieved appreciable success in this direction as described in Chapter VII.

SECTION 2.

Railway Board.

Prior to 1905, railways formed a section of the Public Works Department, but the first Railway Board, consisting of a Chairman and two Members, was then appointed and it was made subordinate to the Department of Commerce and Industry. This arrangement having proved unsatisfactory, a separate Railway Department was formed in 1908, and the head of the Board was thenceforward designated the President and given enhanced powers, including direct access to the Viceroy. There were also appointed an Accountant-General for Railways, a Chief Engineer and a Chief Mechanical Engineer to advise the Board on technical questions.

In 1921, the Acworth Committee recommended (p. 41 of the Report) the creation of a Department of Communications, amalgamating the Department of Railways. It further recommended that the Board should have three Members in addition to the Chief and the Financial Commissioners, each incharge of three territorial Railway Systems, (Western, Southern, and Eastern groups). These recommendations were not then accepted by the Government of India. The Retrenchment Committee in 1931 recommended that the number of members should be reduced from three to two, the number of Directors from five to three and Deputy Directors from five to four. These recommendations were partially accepted by the Government of India. In 1938 the Department of Communications was established and the Railway Department was amalgamated to it. The Railway Board has now a Chief Commissioner, a Financial Commissioner, two other members, one incharge of Establishment and the other of Traffic, a Secretary, an Assistant Secretary, five Directors and four Deputy Directors, with a budget of 9·40 lakhs. The Board directly administers the State Railways and supervises the administration of the Company-managed lines.

The Chief Commissioner of Railways is the principal Executive Officer of the Railways, but he has no power to over-ride the decisions of the Board. The Financial Commissioner is an officer of the Finance Department, but by established practice he is recognised as a Member of the Railway Board. He is not responsible to the Chief Commissioner or to the Board, but to the Finance Department. He is the watch-dog of the tax-payers but in practice he identifies himself with Railway Administration, and fights the Finance Department in the interest of Railways. Very seldom, if at all, he fights the Railway Board for the interest of tax-payers. He has no power to over-rule the decisions of the Board in financial matters.

There are three principal officers of the rank of a Director on the financial side *viz:*—(1) The Director of Finance who is directly under the Financial Commissioner. He prepares the budget and supervises the general finance; (2) The Comptroller of Railway accounts who is under the Financial Commissioner in his capacity as a member of the Railway Board. He has under him the Chief Accounts Officer of Railways and he performs the functions of the Accountant-General; (3) The Director of Railway Audit who is directly under the Auditor General.

The Railway Board prepares the budget of the State and Company managed lines, appoints officers for State Railways and acts as a court of appeal for the staff of a prescribed rank. It lays down the policy and is responsible to the legislature for good administration. The Member in charge of communication replies to all the questions in the Assembly about Railway administration. The powers now enjoyed by the Agents (General Managers) of the State Railways are those vested in them by the Railway Board for administrative convenience. All the officers in the Railway Department are drawn from various railways, often for limited periods. It is desirable, though it is not the practice at present, that members of the Railway Board should be appointed for a period of 5 years and that they should complete their full term, even if the date of their retirement falls within the tenure period.

SECTION 3.

Agencies.

The Railway system in India was first organised by Companies formed in the United Kingdom. The Directors of these Companies had their head-quarters in London and they controlled the administration through an officer called the Agent (now the General Manager). The Agent, and the majority of other officers were appointed by the Home Boards, but they gave extensive powers to the Agents, who ran the administration on business lines. The Agents were responsible to the Boards of Directors for good administration, sound finance and fair dividend to shareholders. These Agents employed their own subordinate staff and made every effort to exercise economy. In the case of State Railways, the Railway Board took the place of Home Boards and partly on account of its official position and partly on account of its vicinity to the Government of India, the interference of the Railway Board in administration was much greater and more detailed. The Agents did not feel the same responsibility as the Agents of the Company managed Railways did. They did not care for economy. The absence of demand

from shareholders for good dividends, and the constant interference of the Railway Board, slackened the enthusiasm of the Agents and they did not realise the need for economy and efficiency to the same extent as did the Agents of the Company managed Railways.

Each Agent (General Manager) has the following heads of departments under him :—

(*i*) The Chief Engineer, who has several deputies under him.

(*ii*) The Chief Mechanical Engineer, incharge of loco and work-shops.

(*iii*) The Chief Superintendent of Operations

(*iv*) The Chief Commercial Superintendent.

(*v*) The Chief Controller of Stores.

(*vi*) The Chief Accounts Officer.

The Agent has several deputies under him, one of whom is incharge of Establishment. The Chief Accounts Officers were directly under the Financial Commissioner of the Railway Board, but as an experiment, the accounts officers are now placed under the General Mangers in some railways.

The administration is dominated by accountants and auditors who are supposed to act as a check on the normal expenditures but they failed to stop the Railway administration from large unremunerative capital expenditure described in the next chapter. Unnecessary accountancy should be simplified both in the interest of economy and efficiency.

In State Railways, where the Divisional system exists (described in the next section), the agencies act as an unnecessary third wheel in a bicycle. The Railway Board lays down the policy, it appoints officers and exercises financial and administrative control and the Divisional Superintendents carry out their instructions

Frequent changes in the personnel of higher posts in State Railways in recent years have contributed to the inefficiency of Railway administration. It is highly desirable that the posts of Agents and of the heads of departments should be tenure posts. They should hold office for a fixed period, say five years, and they should not be made to retire, if it becomes due within the period, nor should they continue to hold office indefinitely till the time of their retirement. Extension here, as in the case of the Railway Board, should be given in exceptional cases when the officer is engaged in any special work which he alone can do.

The Wach and Ward Depaitment on E. I. R. & O. R. R. was temporarily established in the year 1923 and was made permanent in 1927. The establishment was due to abnormal thefts for which railway administration had to pay many claims. Many railways have now organised a separate Watch and Ward Department, which is under a senior officer called the Superintendent. In some railways it is under an Assitant Superintendent who is attached to the Department of Chief Commercial Manager, or the Traffic Manager. The N. W. R. has a separate Watch and Ward Department. Divisional Watch and Ward Inspectors are employed by each Division and they work under the instruction of a Transportation and Commercial Officer.

SECTION 4.

Divisional *versus* District Organization.

1. District organization is now followed almost in all the Company managed lines. In this system, the Chief Superintendents have under them several Senior Scale Officers who are incharge of a section of the line called District. These deputies are known as district officers of the branch. The headquarters of these district officers representing different branches are not necessarily located in the same town; nor are sections identical.

In Divisional organization, the same section is allotted to Senior Scale Officers known as Superintendents and they are all stationed at one place under an officer called the Divisional Superintendent. He co-ordinates the work of various officers. The organization in the office of a Divisional Superintendent is almost the same as that in the office of the Agent.

The idea of Divisional organization first originated in the United States of America and it was subsequently introduced in Germany. It may be remembered that in U. S. A., there is no Railway Board and in Germany they are no agencies.

The fundemental principles of the Divisional scheme were enunciated as far back as 1909 by Sir Charles Stuart Williams then Mr. S. C. Stuart Williams, Secretary to the Agent, E. I. Railway, in his book " The Economics of Railway Transport." But at that time the ideas was discountenanced by Railway authorities in India. Th Railway Board, in 1932, on the recommendation of Mr. A. T. Stowell, an Officer on special duty with the Board, introduced the scheme, and it was stated that the Divisional organization would be more economical than the old District system. The Railway Board

made the same mistake in calculation which it did in advocating the separation of audit from accounts. In practice, the Divisional system necessitated the employment of a large number of highly paid officers without corresponding efficiency. Although wide powers, corresponding with those of Agent, have been vested in the Divisional Superintendents, there has not only been no corresponding reduction in the number of administrative officers employed for the purpose of dealing with matters of policy, but there has been a large increase in the number of such officers under the Divisional system. The Divisional Scheme was introduced first on the N. W. R. in 1924 and then on the E. I. Railway while a modified form of this scheme was adopted by the G. I. P., shortly after its acquisition by the State.

The following figures prove the extravagant nature of the Divisional Scheme. The Company owned Railways, because of this, have, without exception, refrained from this system, which accounts for the increase of expenditure on the State Railways, as compared with that on the Company managed Railways.

Railways.	Mileage.	Number of Officers.
B. B. & C. Railway (Company) .	3,925	124
E. I. Railway (State) ..	4,138	127
G. I. P. Railway (modified scheme) ...	3,660	308

The B. B. & C. I. Railway is as efficient in working as the E. I. Railway. The former has electric traction over nearly 120 miles of its system, and yet it is able to cope with the work with 194 officers against 427 on the E. I. Railway.

The Railway Board in a note presented in 1931 to the Railway Retrenchment Committee, defended the system of Divisional organization in the following words :—

" One of the chief reasons for the introduction of the scheme was the size of the railways concerned. Mileage on the N W. R. is increasing rapidly with new construction. The E. I. Railway was increased by some 1600 miles when it took over the old O. & R. while the G. I. P. is also a very large system. There are authorities who maintain that for lines of this size, divisionalisation is a *sine qua non* if operating effiiciency is to be maintained at a satisfactory level.

The fact, therefore, that no sudden and spectacular improvement in operating figures has resulted from the introduction of divisionalisation does not prove that the results might have deteriorated appreciably if the re-organization had *not* been resorted to." The Railway Retrenchment Committee after examining the subject remarked :—

"We feel strongly that the divisional organization has not always resulted in the decrease in direct costs that might have been expected of it. With a senior experienced officer as Divisional Superintendant, it is obvious that the headquarters organization should be considerably cut down. The Divisional Superintendent is expected to take full responsibility for the harmonious working of his division and to act as a sort of semi-Agent so far as his division is concerned, and we consider that the logical conclusion of the divisional system of organization is that there should be as little interference from headquarters as possible and that the Agent should confine himself to directing broad matters of policy. We find, however, that on the North Western Railway, in spite of each division having two or three Divisional Engineers, the Engineering branch at headquarters still consists of one Chief Engineer, and three Deputy Chief Engineers. There is, we have no doubt, considerable scope for reduction at headquarters if the present divisional organization should remain and be a success".

Either the divisional system should be abandoned or the number of administrative officers at head-quarters should be curtailed. Divisional organisation is an appendix, which gives no relief ; and it may be annoying. It is copied from America and Germany, but we forgot that in America there is no Railway Board and that in Germany there are no agents.

SECTION 5.

Company management *versus* State management.

The Railways in India as described in Chapter I were first constructed by the Companies chartered in England, with a minimum profit guaranteed by the Indian Government. The guaranteed rate of interest was fixed at a level which was to be not less than the bank rate prevailing at the time. After the Great War the Railways all over the world began to yield large profits and effort was made in many countries to acquire the Railways for the benefit of the State. As the terms of contract of some of the bigger Companies were to expire in the near future, the Secretary of State referred the question to the Acworth Committee (*vide* Chapter I, Section 3). Four possible methods of management of the Indian Railways belonging to the State were considered by the Committee ; *viz.*, management purely by English Companies ; by a combination of English and Indian

Companies by; Indian Companies, or lastly directly by the State The Committee unanimously ruled out the first two methods, and the opinions were equally divided between State management and management by Indian Companies. The Committee by the casting vote of the Chairman decided in favour of management directly by the State. Few people will be found to deny that a Company, investing its own money, managing its own property, and judging its officials by their success in producing results in the shape of dividends, usually conducts its business with more enterprise, economy and flexibility than is found by experience to be attained in businesses directly managed by the State. But the property entrusted to the management is not their own, and their financial stake in the undertaking is relatively very small.

The minority claimed the following advantages :—

(*i*) Indian public opinion will obtain full recognition without the bureaucratising of a commercial organisation.

(*ii*) The appointment of Indians to high administrative posts and the promotion of specially meritorious Indians from subordinate to higher grades will be better secured under its scheme than on State managed Railways. The proposal will afford to educated Indians the best possible opportunities and facilities for learning the management and control of large commercial and public undertakings, and give them an opportunity of becoming equally competent with trained Europeans in direction and management. This is one of the most important grounds which lead Indian opinion at present to desire State management; but we believe that by our proposal their object can be achieved in a more direct and definite way.

(*iii*) By the Government guarantee of a fair rate of interest, such trust money as requires investment will be attracted; and there is a great probability, nay, almost a certainty, that a large amount of money from insurance Companies, which have of late been rapidly growing in India, will become available. It will have the further advantage of tapping a new field of investors in India itself, to whom a guarantee with additions based on a share of the profits will naturally appeal.

The minority recommended the following provisions for the Indian Companies to whom the administration of Railways may be entrusted.

(*a*) "The Government of India should have the right to acquire the shares subscribed by the public at a stated

period, by giving six or twelve months' notice, and at such reasonable premium as may be agreed to at the inception of the Company,

(*b*) The Board should consist of 10 Directors; five to be elected by the outside shareholders and five to be nominated by Government It is desirable that half the number of Directors should be Indians,

(*c*) Government should have the right to nominate a chairman from among the 10 members the Chairman should have a casting vote,

(*d*) The management should rest with the Board of Directors as is usual in commercial concerns, except so far as legislation intervenes and except in such matters as control of rates, allocation of capital and revenue expenditure and service to be rendered to the State,

(*e*) Should there be any disagreement between the nominated and the elected Directors which necessitates the exercise of chairman's casting vote, the matter should be referred to the Government of India, if the minority so desires.

There is not much difference between the State and the Company managements. Full control of the Government was admitted by both the sides. In one case the Government administered it as one of its Departments and in the other through a body over which they had full control.

The Railways at that time were paying good dividend and many countries undertook direct administration of railways as revenue yielding concerns. From 1930 onwards, the railways ceased to yield good revenue and Governments in different countries including the Indian Government began to wash off their responsibilities from direct adminstration.

The Government of India after the report of Acworth Committee took charge of direct administration of E. I. R., G. I. P., and Burmah Railways when their contract expired, but they deferred the acquisition of Railways whose term expired after 1930.

There was a full debate in the Assembly in 1930 about the acquisition of B. N. Railway, but the Government of India in view of the expected statutory Board, deferred the acquisition and extended the period of contract. The Government of India Act of 1935 handed over the administration to Federal Railway Authority, but the Authority was never established on account of changed political conditions.

We are now in a chaotic condition. Direct administration by State has not proved a success. It is neither efficient nor economical. The extension in the period of contract of Company managed railways by a short period of 5 years is still more undesirable. It is a very contentious problem and the Government of India will have to face it at an early date.

My own opinion is that Railways should not be managed as a department of the Government of India. Their administration should be handed over to a statutory authority which should be responsible not to British Parliament but to Indian Legislature for its efficiency. Railways should be run as business concerns and should be excluded from the party politics of the country. The Company administration should continue as at present till such time as the statutory authority is fully established and it has formulated the plan of amalgamation described in the next Section. The Railways should be administered as a single unit and not as a group of various units, whose justification is only historical.

The periods of contract of all the Companies should be extended in a manner that they all expire on the same date, as is done in France (Ch. II, Sec.)

SECTION 6.

Amalgamation of Railways.

Since the inauguration of the Railway system, the Government of India have given all possible encouragement to the investment of capital on Indian Railways. Companies were formed both in India and in England for construction of lines. Some of the Companies were so small that their share capital did not exceed few lakhs. Soon after the war the need for amalgamation of Railways was keenly felt by every country in the interest of economy and efficiency. In the United Kingdom, the Railways were constructed and worked by private Companies which were 118 in number, 27 of them were constituent Companies and the remaining 91 were subsidiary Companies. All the Companies were amalgamated into four groups by the Railways Act of 1921. The first few sections laid down the advantages and the manner of giving effect to the scheme of amalgamation.

Section (1). "With a view to the reorganisation and more efficient and economical working of the Railway system of Great Britain, railways shall be formed into groups in accordance with the provisions of this Act, and the principal Railway Companies in each group shall be amalgamated, and other Companies absorbed in the manner provided by this Act."

Section 2. "The groups to be formed shall be those specified in the first column of the First Schedule to this Act.

Section 2. (1) "The constitutent Companies in any group may, on or before the first day of January, nineteen hundred and twenty-three, submit to the Minister of Transport an amalgamation scheme framed in accordance with the provisions of this Act which has been agreed to by all those Companies.

Section 2. (3) "If the constituent Companies in any group fail to submit an agreed amalgamation scheme framed in accordance with the provisions of this Act on or before the said date, a scheme for the amalgamation of the constitutent Companies in that group shall be prepared and settled in accordance with this Act by the Amalgamation Tribunal.

The groups formed under the said Act were :—

1. The Southern group consisting of 5 constituent and 14 subsidiary Companies, known as Southern Railway (Victoria).

2. The Western group consisting of 7 constituent and 26 subsidiary Companies now known as Great Western Railway (Paddington).

3. The North Western Midland and West Scottish group consisting of 8 constituent and 25 subsidiary groups now known as London Midland and Scottish Railway (Euston).

4. The North Eastern and East Scottish group consisting of 7 constituent and 26 subsidiary Companies now known as London North Eastern Railway (Liverpool Street).

The Scheme of amalgamation proved a great success and the Railways in the United Kingdom faced the period of depression without appreciable reduction in staff or in salaries. The four Railway groups so much appreciated the scheme of amalgamation that they, on their own accord, commenced the work of pooling their resources together. Sir Josiah Stamp in addressing the shareholders of the London Mildland and Scottish Railway Companies in February, 1933, made the following observations.—

"No doubt a few years ago public opinion was such that any radical scheme of this nature would have been hotly opposed and suspected by industry, but that opinion has developed in the direction of doubting the wisdom in all circumstances of unchecked uneconomic competition with its waste of capital resources."

The pooling schemes in Great Britain have been designed to secure economies under five heads by :—

(*a*) combining canvassing staffs, advertising and publicity activities, and town offices,

(*b*) combining streams of traffic over certain routes which are now spread over two or more, and by eliminating unnecessary train mileage;

(*c*) combining terminal and other stations where convenient, and by combining other facilities such as running sheds;

(*d*) avoiding duplicate capital expenditure; and

(*e*) simplification of accounting work between railways

Pooling schemes have resulted also in improved public facilities by inter-availability of tickets and joint re-arrangements of train services."

Acworth Committee did not tackle the problem of general amalgamation, but it restricted its consideration to two main issues *viz.*, (1) the administration of Railways by State as described in section 5 and (2) the absorption of branch lines by the main lines.

There were at that time 174 Railway undertakings of which 11 were major Railways described as class I Railways and the remaining 163 were feeder lines. Some of these lines belonged to Indian States, others belonged to Companies or to the Government.

The Committee was of the opinion that :—

"The Branch Line Company is usually a fifth wheel to the coach. It implies in some cases a separate construction staff; it always implies a separate Board of Directors, and separate accounts. In cases where the branch is worked by the main line, if its Directors feel that the management is unsatisfactory, they not only can make representations to the main line administration, but in the last resort can appeal to the Railway Board. And this does not make for harmony. It is further evident that capital raised by a small private undertaking, even with a Government guarantee, will cost more than money raised directly by the State. As against this a certain weight must in fairness be attached to the claim that the Branch Line Company obtained from local sources money that would never be subscribed to a Government loan."

But there is an objection to Branch Line Companies which goes much deeper. India has only 36,700 miles of line. The Mackay Committee 14 years ago said that India needed 100,000. But

if the extensions are to be made by scores and hundreds of little independent Companies, the resulting confusion will be inconceivable. Naturally each Company, small or great, desires to reserve for itself what in the diplomatic world is called a "sphere of influence"; and jealously claims that if any new-comer intrudes into that sphere, he shall pay toll to the original concessionnaire.

The Committee pointed out a number of difficulties in working branch line by independent Companies and recommended :—

"That branch lines shall, as far as possible, be constructed and worked by the main lines to which they are tributary; and that only if the State is unable or unwilling to provide the funds itself shall the formation of separate branch line companies be encouraged. So soon as financial conditions make it possible for the Government to go forward again with railway development, the Indian States should be called into council and invited to take part in working out a common plan in the common interest."

In spite of ample resources which were then available, the Government of India took no practical steps towards amalgamation or even the absorption of small feeder lines in the main lines. The question of amalgamation was taken up by the Pope Committee which recorded the following opinion :—

"The economies obtainable through amalgamation of railways into a number of groups are so evident that the Committee cannot conclude their report on possible improvements in efficiency and economics in the operation of railways in India without reference to the question. In Bombay, for example, the economies derivable from amalgamations of workshop resources, accounting staffs, etc., between the Great Indian Peninsula and Bombay Baroda and Central India Railways are obvious. Somewhat similar circumstances exist in the Calcutta area with respect to the East Indian and the Eastern Bengal Railways".

Great Britain and Germany have passed through the difficult phase of amalgamating their railways from a number of different undertakings into four and one respectively. In the United States, large amalgamations are contemplated. The Committee considers the questions, arising in schemes for amalgamation, shall be studied in advance in the light of the experience gained in the various countries in which such schemes have been put into effect, by experienced officers representing commercial, operating, civil and mechanical engineering interests. The Pope Committee in its Second report, *vide* p. 14, pressed the question of amalgamation again in the the following words :—

"In section 6 of the Committee's first report, suggestions were made indicating on broad lines how economies could be effected as a result of the amalgamation of certain railways in India. It is appreciated that the subject is one which requires careful consideration, detailed investigation, and preparation in advance before action can be taken. It is felt, however, that even if the Railway Board are not in a position to make a definite move at present with respect to major amalgamations, it might be possible to effect certain minor amalgamations and combine resources on railways on a limited scale with beneficial results which would be a preliminary to, and eventually form part of, any amalgamations Although a great deal has been effected between railways in the way of joint station working, joint booking offices in large towns, and in other directions, it is considered that there are possibilities of still further economies if a systematic examination was made with this object and with due appreciation of the fact that no economy is so small as to be negligible. The tendency of railway administrations, whether State or Company, is to preserve their individual identity, and in many cases this has led to the existence at points of contact, of parallel organisations which could have been avoided by mutual co-operation"

Even if the Government of India may not be prepared to undertake amalgamation on a large scale, the amalgamation of less importance can be effected by the mutual agreement of various Railway administrations, such as amalgamation of workshops, purchase of stores, information bureaus, booking and parcel offices, and transhipment, on account of break of gauges. The only official announcement on the subject of amalgamation is the speech of the Hon. Sir Mohammad Zafrullah Khan, the then Railway Member which he delivered on the Resolution moved by Mr. Azhar Ali on 11th February 1936. He said :—

" The Pope Committee recommended that one of the methods of making any major savings in the working expenses of railways would be by means of amalgamation of various systems. One of the considerations applying to this railway also is or may be that, if it is taken over, there might be some chance of its amalgamation with the system of the Eastern Bengal Railway and that both might be worked together. Government have already undertaken an examination of these two aspects of the question, that is to say, one, the increase in working expenses that may be expected by transfer of this railway to State management, not only on the Company's section of the railway, but also on the Company-owned portion of the R. K. Railway, as I have said, both these being bound to go together ; secondly, an examination of the possible increase

in revenue to counterbalance the almost certain increase in working expenses that may be achieved by increasing rates and fares. Government are, therefore, faced with the situation that the main consideration for the acquisition of the Madras and Southern Mahratta Railway would be the effecting of economies that might result from an amalgamation of the system with the South Indian Railway but there is this difficulty with regard to their contracts. We are entitled to give notice for acquisition with regard to the Madras and Southern Mahratta Railway at the end of any subsequent period of five years so as to acquire it at the end of 1942 or 1947 and so on. With regard to the South Indian Railways, the chance of acquiring it does not occur in the normal course before the end of 1945, so that there are various positions which arise with regard to an adjustment of this disparity between the two dates, and Government have under consideration several schemes, the adoption of any one of which might give the desired result. One course which requires exploration is the course that has been urged to-day, that notice should be given at the end of the year for the acquisition of the Madras and Southern Mahratta Railway at the end of 1937, that it should be taken over as a separate system as it now exists and run as a separate system and that we should wait for the acquisition of the South Indian Railway in the normal course at the end of 1945, and then amalgamate the two. Another alternative would be to extend the contract with the Madras and Southern Maharatta Railway till 1945, that is to say, it might be made co-terminous with the contract of the South Indian Railway, on condition that the two railways should amalgamate and that then the amalgamated system might be acquired at the end of 1945, on such terms as may now be settled when one contract is made co-terminous with the other. A third consideration is that the Madras and Southern Mahratta Railway might be acquired in 1937, and that the South Indian Railway might be acquired, by private negotiation, also at the end of 1937, and then an amalgamation of the two might be carried into effect".

The Government ultimately decided to extend the period of contract of both B. N. W. and M. & S. M. Railways and took no further steps about amalgamation. Money at present is very cheap, but the Government of India have taken no action to purchase branch lines and absorb them with main lines as part of their system.

There are at present eleven class I Railways (excluding Burmah), whose income is over 50 lakhs, each working a number of branch lines; and the aggregate number of branch lines comprised in the system is 99. The number of class II Railways whose income is

between ten and fifty lakhs is 14 and it comprises 28 smaller companies. The number of class III Railways, whose income is lesss than 10 lakhs, is 22 comprising 23 companies The smaller companies for want of money have mostly constructed Metre Gauge and Narrow Gauge lines and their personal interests always stood in the way of securing uniformity in gauges. The question of amalgamation and particularly the absorption of branch lines in the main lines, however complex and opposed to vested interest it may be, will have to be faced sooner or later in the interest of economy, efficiency and smooth administration.

SECTION 7.

Indian Railway Conference Association.

The constitution and functions of the Indian Railway Conference Association follow closely those of the American Railway Association. Though having directly and ostensibly nothing to do with the Government of India, the Association is unofficially sponsored by the Railway Board with which it also keeps in close touch. But essentially the Association is inter-railway in its scope and has for its object the technical and general co-ordination of the methods of operation of the various railway administrations, whether under State or a private Company's auspices.

The first Railway Conference was held in Calcutta on 10th February 1879 under the presidentship of Col. Tevor, the then Director General of Railways. The primary object of the Conference was to establish a system of the interchange of rolling stock among broad gauge Railways. On the interchange of rolling stock, the Government of India sent the following despatch to the Secretary of State on the 13th March 1879 :—

"Your Lordship is aware that the present rules for the interchange of rolling stock between connected railways are unsatisfactory and, in times of brisk traffic, were the cause of much friction between the Companies and inconvenience to the public. Our first object was therefore to remedy this evil, and to this end the Conference has framed a revised set of rules for the interchange of stock. Although these rules are not all passed without dissent from some of the delegates, we believe that the Conference was unanimous in the opinion that they should be accepted by all; and we trust that Your Lordship will enforce on the several Boards of Directors the necessity of some mutual agreement, which shall, to the greatest possible extent, ensure a free and unrestricted interchange of stock between all broad gauge lines all seasons of the year."

In 1902 a Conference was convened by the Government of India to discuss and consider whether :—

(*a*) a permanent Conference shall be established independent of the Government control, with a paid Secretary and a President elected by the Conference, and if so,

(*b*) what the name, powers and functions of this Conference shall be :

or (*c*) if the Meeting is unable to recommend the establishment of a permanent Conference, whether the "Standing Committee" of the Conference shall be continued.

The Conference decided that an annual Conference be established independent of the Government under the rules framed by the Boards of Directors of the Companies railways, and that its name should be Indian Railway Conference Association. The first session of the Conference independently of the Government was held in 1904 and since then it has been holding its meetings regularly. The functions of the Association are :—

(*i*) to frame rules for the management of traffic interchanged between railways, including rules for determination by arbitration of inter-railway claims on account of interchanged traffic and rolling stock ;

(*ii*) to act as Board of Conciliation ;

(*iii*) to conduct the Broad Wagon Pool ;

(*iv*) to conduct the Neutral Control of Examination of Broad Gauge Wagons at interchange junctions ;

(*v*) to advise on other subjects relating to railways which may be referred to it as hereinafter provided for : and

(*vi*) to carry out such other functions as may, from time to time, be decided upon : provided that the rules passed by the Association shall not extend to matters of internal administration which shall remain under the complete and exclusive control of the several railways.

The work of the conference is carrid on in 11 sections :—

(1) Administrative,

(2) Audit and Accounts.

(3) Commercial,

(4) Electrical,

(5) Engineering (with a sub-committee of Signal Engineers of Class I Railways),

(6) Mechanical,

(7) Medical,

(8) Operating,

(9) Personnel,

(10) Statistics and

(11) Stores.

The Indian Railways Conference Association has a permanent paid General Secretary, a Deputy and an Assistant and one Neutral control officer. The office is located in New Delhi and has a building of its own. Every Railway system big or small is a member of this Conference, but bigger railways are represented by more than one member. The total number of members is 154 and the maximum number alloted to one Railway system is 10.

The Government of India does not give any grant to the Conference, which is maintained entirely by contributions from various railways.

The budget is prepared by the General Secretary in conjunction with the Accounts Officer concerned under the following heads :—

(*i*) General Branch,

(*ii*) Wagon Interchange Branch,

(*iii*) Neutral Control Head-quarters Branch,

(*iv*) Neutral Control Junctions.

The budget is then submitted to the Railway Board for sanction and no amount is spent without their approval. The total budget of the Conference is Rs. 4, 32, 700.

The Railways in India have pooled their Broad Gauge Goods Wagons and they are regulated by the office of the Railway Conferenc. The General Secretary is also the Director of the Pool of about 150,000 Broad Gauge Wagons and he controls the outdoor staff of 250 men placed at Neutral Control junctions. Any Railway desiring the loan of goods approaches the General Secretary who provides it with the wagons belonging to other systems. The Railways pay Rs. 2-8-0 a day for four wheeler and Rs. 5 a day for a bogie to the

Railway administration to which the wagons belong. In addition to the hire charges, Railways pay small fees to the Railway Conference for the maintenance of the staff.

SECTION 8.

Central Standards Office.

In a report prepared by the Railway Board in October 1929, it was urged that standardization leading to increased efficiency and economy was urgently needed in the Civil, the Mechanical and the Signal Engineering, the Stores and other technical branches of railways and that a self-contained organization was necessary to prepare standard designs and specifications for all classes of materials, plant and rolling stock in use. The Central Standards Office was accordingly created on a temporary basis for 5 years, and commenced functioning on 1st March 1930.

The work of the Central Standards Office is based upon the advice of the following seven Standing Committees :—

(*i*) The Locomotive Standards Committee formed in 1924.

(*ii*) The Carriage and Wagon Standards Committee formed in 1924.

(*iii*) The Track Standards Committee formed in 1925.

(*iv*) The Bridge Standards Committee formed in 1925.

(*v*) The Signal and Interlocking Committee formed in 1926.

(*vi*) The Stores Standards and Specifications Committee formed in 1938.

(*vii*) The Electrical Standards Committee formed in 1935.

The Central Standards Office provides a Secretary for each of these Committees. The personnel of the Standard's Committees consists of a few selected officers from Class I Railways representing State and Company managed lines throughout India.

The Retrenchment Committee examined its work in 1931 and it recommended :—

" We think the post of the Chief Controller of Standardisation should be abolished and his work entrusted to the Director of Engineering, Railway Board, who should be assisted by two Deputy Directors —one a Civil Engineering Officer and the other a Mechanical

Engineering Officer. These two officers should deal only with standardisation work and should not be expected to take part in the Railway Board's office work to any extent. They should be considered as temporary for the present

The question was referred to Mr. Pope during his second visit and he laid great emphasis on the immediate need of more extended technical research to enable Indian Railways to keep abreast with modern development in railway practice. As a means to this end, he advised that the Central Standards Office should be strengthened.

The Railway Board thought that the time had arrived not only for placing the organization on a permanent basis, but for strengthening it in order that the advantages which have already been obtained may be consolidated and further benefits obtained

In February 1935 the Standing Finance Committee approved of the office being made permanent from 1st April 1935 and it also sanctioned the extended cadre and also provided an annual grant for a systematic research and sanctioned Rs. 50,000 for the year 1935-36.

The Pacific Enquiry Committee in para. 122 justified the existence of the Central Standars office which, in its opinion, carried out a great deal of work on the standardisation of details of rolling stock, permanent way, material and bridges.

Later on, in the Report in para. 156 it said, "there are many other fields of activity which can be profitably developed by a permanent central organisation such as the Central Standards Office. They can initiate investigations which can well be carried out by the various Administrations, but, to enable results to be properly analysed and interpreted, the staff must consist of persons who are free from ordinary routine work of the Administrations and who can be sent to watch and follow up research in the field. We consider that this work is so closely associated with that at present being undertaken by the Standards Office that it would be desirable for it to form an integral part of it."

The Pacific Enquiry Committee has made it abundantly clear that the desigh of X B Engines was faulty and it did not suit the track and recommended that these engines should not be allowed to run with a speed greater than 45 miles an hour. These engines were designed by the Standardisation Officer in India, which is responsible for loss of money and loss of life. The plea advanced by the Standards Office that these faulty engines were designed on

account of the direction of Railway Board for increasing the Boiler Capacity and to make use of inferior quality coal, is a poor excuse. It disregarded the fundamental principle of all traffic safety first, everything else afterwards.

SECTION 9.

Clearance Accounts Officer.

The question of forming a Clearing House for the accounting of inter-railway transaction in India has been discussed at intervals for quite a long time past. The most important of these discussions started in 1920-21 when the question received attention from the Indian Railway Accounts Committee composed of four eminent and experienced Railway Accounts Officers who were deputed to the United Kingdom and America to study the accounts systems in vogue there and to report on the feasibility of adopting those methods with advantage in this country. The majority recommended, therefore, the simplification of the Tariff, uniformity of Classification and apportionment on mileage basis as the steps to be taken first and it further said that so long as an allocation had to be made on each invoice with reference to the facts in it, there was no special advantage to be gained by establishing a Clearing House. Mr. Scott dissented and he thought that it would be possible to evolve a system of apportionment on a ton mileage (or a rate-ton-mile) basis which, he thought, would give approximately the same results as allocation on the basis of each invoice. With this rate-ton-mile basis and with mechanical appliances, Mr. Scott considered that a Clearing Accounts Office in India would be an economical proposition. In 1925 an experiment was conducted at Lahore, first under the initative and guidance of Mr. Scott and then under the supervision of Mr. Deane, as to the possibility of adjusting freight on "through" traffic on ton-mile basis. The result was not as satisfactory as had been hoped.

Mr. Scott then devised another method by which arithmetical operations could be simplified by the use of machine. The Government decided on the 18th December 1926 to establish a Clearing House temporarily for three years in the first instance for the adjustment of foreign transactions of the four State-managed Railways in India. It was also decided to locate the Clearing House at Delhi. The concentration of so much work in a single office would have made it unwieldy; and it was, therefore, decided to open a branch of the Clearing House in Madras, if the Company-managed Railways in South India were prepared to join the Clearing House. No

branch, however, was opened in Madras because it was decided shortly after to make another experiment in a different direction altogether. The advantages claimed for Clearing House, in the words of the Director of Clearing House, are :—" It is obvious that if A and B have various transactions with each other, it is much simpler for a neutral person (who has access to all the original transactions) to prepare and check the amount between A and B than for A to inform B of certain transactions and for B to inform A similarly of certain others and for both to check each other's accounts The advantage becomes all the greater when the neutral person C makes adjustments finally (as the Clearing House does in the case of State-managed Railways) without any further check by A or B."

It should be noted that checking between two State Railways is superfluous, and the Company managed Railways will not accept the results without checking them for themselves. The Railway Retrenchment Committee examined the system in 1931. The system was introduced on the plea of economy and the Director of Clearing Accounts Office attempted to show that it was economical. The Committee examined the figures and remarked :—

" Taking all these facts into consideration we cannot conclude definitely that the institution of this office has resulted in any appreciable saving. On the other hand, apart from the necessity of construction of quarters, which is a matter for the future, we are equally far from being convinced that it has resulted in any appreciable additional cost and, in particular, we cannot say that there will be any immediate and direct financial advantage in reverting to the old arrangement. Apart from the immediate resulting disorganisation, reversion at present to the old arrangements might very well involve an immediate, though temporary, additional cost. We are, however, constrained to observe that the mainor practically the only real virtue claimed for centralisation is economy : and judged by this criterion, a *prima facie* case may be made for the abolition of this office and reversion to the old arrangements. And while we do not recommend the abolition of this office at present, we consider that its retention should depend on its being possible to reduce expenditure appreciably."

The writer added the following note to the report (p. 71 Retrenchment Committee Report) :—

" The associations and private individuals who submitted their memoranda to us were almost unanimous in their suggestion that the Clearing Accounts Office in Delhi should be abolished. I have not been able to see the working of this office, as we began and finished enquiry during the Assembly session of

Simla where we were otherwise busy. We are spending about 18 lakhs in maintaining an elaborate office for calculating with mathematical accuracy the amount which each State Railway should pay to every other State Railway. Such expenditure, in my opinion, is not justifiable and it is unnecessary waste of money. Had the percentage which one State Railway paid to other State Railways under each head varied abnormally from year to year there would have been some justification for maintaining the costly office. From the figures supplied to me by the Director of Clearing Accounts office it appears that variation is not abnormal. The variation is abnormal only in traffic of horses and dogs, but the amount involved in this variation is very small. There is also some unusual variation in the figures of the Eastern Bengal Railway". After giving the mutual figures for the years 1928, 1929 and 1930 he concluded by remarking :—

"I therefore suggest that convention may be made between various State Railways and a percentage of their income under each of the above heads should be fixed for contribution to the State Railways The proportion should be the mean value of the figures of the last 4 to 5 years. The percentage should be revised after every five years as the flow of traffic may be diverted on account of the construction of new lines. I am strongly of opinion that one State Railway should not be treated as a foreign line by the other State Railways. Traffic on two State Railway lines should be considered as home traffic and all concessions given for long distances may be allowed in such cases."

SECTION 10.

My own observation.

The present system of control by a Railway Board was devised at a time when most of the Railways, although owned by the State, were administered by the Companies and the work of the Railway Board was limited to supervision and co-ordination. Now it has double function ; it administers directly and supervises the bulk of broad gauge lines. The task will become stupendous if other Company manged lines are brought directly under State control. The relation between Railway administration and the Central Legislature will need a revision. Budgetary control of legislature at present is only nominal. Members may ask questions and pass resolutions, but they cannot interfere in the administration. The Legislature cannot dictate to the Communications Member at present but, after the introduction of Reforms, it will be able to dictate to the Minister for Communications.

It seems desirable that the entire machinery may be altered to suit the changing conditions. We should follow the practice of the countries which directly administer the Railways. The Administration should be handed over to a Railway Authority as outlined in the report of the London Committee of 1933. The Authority should be responsible to the Indian Legislature and not to the British Parliament. The members should all be whole time officers and they should not be honorary officers like the directors of companies, who leave everything to the Managing Agent and are satisfied if good dividends are paid. The Railways in every country are not entirely business concerns. They have responsibility to trade and industry and other broader interests of the country. They have to provide certain facilities even if these cause financial losses, which a purely business concern will not do. In return they expect the legislature to protect them against their competitors, which a financial concern cannot claim. It is inconceivable that the people of India for whose benefit railways exist, should have no voice in the administration of their own railways. It is, therefore, essential that the Railway Authority should be responsible to the Indian legislature for good administration, but it should be independent in matters of general administration.

The present Railway Board, as contemplated in the London Committee report, should be abolished. The Chief Commissioner should be the principal executive officer, who should have under him a number of Directors and Deputy Directors in-charge of various departments. The post of Financial Commissioner, as the watch dog of the Finance Department, is unnecessary. The supervision will be exercised by the Railway Authority and no watch dog is necessary. The Chief Commissioner will have a Director of Accounts administration under him. This will lead to a fundamental change, and a very desirable and necessary change. At present the Railway Administration is dominated by the Finance Department ; finance is not controlled by the Railway administration, but the administration is controlled by the finance, which is fundamentally wrong. The Railway Authority should of course have a Financial Advisor who should be subordinate to the Authority and not to the Finance Minister. His presence would enable the financial examination of all schemes simultaneously with their examination from the technical and administrative points of view.

There exist at present two parallel systems . (1) Administration under Member for Communications and (2) Financial, under the Finance Member ; one cannot expect harmonious working under a dual system of control. After the establishment of the Railway Authority the control of the Finance Department should cease and accounts branch, like traffic and egineering, should be under a

Director. The general audit should remain under the Auditor General as at present. The Budget should be scrutinised by a small committee of two Houses of Central Legislature as in Belgium. The vote of the Legislature should be necessary for capital expenditure.

The Authority should not raise any loan direct, but the loans should be raised with the consent of the Legislature by the Government of India. All the Railways in India should ultimately be administered directly by the Railway Authority, but not till the administrative machinery is well established and its efficiency is tested by experience. They should be brought, as in France, to State control on the same date. They should all be amalgamated into one unit. The agencies will then automatically disappear. The Government of India should purchase all feeder lines as early as possible and hand over their management to the Railway administration of which they are feeders, as recommended by the Acworth and Pope Committees. The Government of India had accepted the recommendation but they did not attempt to put them it practice.

The bigger railway lines should not be brought to State control on different dates as arranged at present. It would make the work of amalgamation very difficult, and re-shuffling will be necessary each time a big railway line comes under State control. The Government of India should fix a definite date when all the Company managed lines may be acquired by the State. The extension of the period of contract for a short time, as was done in the case of B. & N. W. and M. & S. M. Railways, does not lead to efficiency. It is difficult to fix the date when all railways are brought under State management, but it should be some years after the expiry of the last contract.

After the amalgamation, the Railways should all be taken as a single unit and the present sub-division based on historical grounds should cease. Like the army, we my divide our railways into four circles, each under a general manager. These circles may be called Northern, Eastern, Southern and Western, with headquarters at Lahore, Calcutta, Madras and Bombay. The Divisional system, with larger territorial areas coinciding as far as possible with political provinces, may then be organized, and the Divisional Superintendents should have extended powers. The Divisional system, as now organised is neither efficient nor economical. It has introduced divided responsibility and has increased expenditure. The posts of the members of the Railway Board, Directors, General Managers and Chief Superintendents should all be tenure appointments for five years, and officers holding these appointments should not be made to retire even if their retirement is due within the period of their tenure. The Railway Conference should ultimately be made a Statutory body and it should not merely be advisory. The Railway Clearing House will automatically be abolished when amalgamation is effected.

CHAPTER IV.

Finance.

Figures in this section have been taken from the Railway Administration and Appropriation Reports for 1937-38. A few figures have been added from the budget for the year 1939-40.

SECTION 1.

General Financial Position.

The Indian Railways, in spite of their over capitalisation, are run more economically than a similar administration in any other country. The Railway route mileage, is 41,075 against 31,000 in Great Britain, 33,000 in Germany and 9,500 in Japan. The capital at charge is Rs. 845·68 crores and it has increased by 205 crores since the separation of Railway Finance. The capital at charge includes different classes of capital described in section 8. It may roughly be divided into two classes: (1) The capital borrowed through the Government of India on which the contribution of one per cent is paid to the general revenues; this amount is 753·8 crores; (2) Capital contributed by the Companies, Indian States, Provincial Governments and other bodies

The capital of the Government of India is invested as follows :—

	Rs. in crores.
(*a*) In State Railways managed by the State	461·62
(*b*) In State Railways managed by Companies and Indian States ..	288·98
(*c*) In State Collieries and other miscellaneous items...	3·20
Total ..	753·8

This figure of 1937 now stands at 759·53 crores, *vide*, Explanatory for Memorandum for 1939-40, p. 27.

The calculation of the capital at charge requires some modifications which are discussed in the following sections. The annuities paid to the companies fixed at the time of purchase for

cash value should be included in the capital at its present worth. The money paid by charitable societies on which no interest is paid should be excluded, on the same ground that cost of land given to Railway Companies is not, in most cases, included in the capital.

The capital at charge or loan increases every year and the following figures taken from the normal budget of 1939-40 will serve as an example of the manner in which new loans are now spent :—

		Rs. in crores.
Open Lines	(*a*) Rolling Stock ...	1·58
	(*b*) Other items ..	2·39
	Total ...	3·97

The contribution for the same work from depreciation fund is 7·46 crores.

Four crores are borrowed this year for the improvement of existing lines. Eighty-five lakhs are spent in new constructions and 92 lakhs on account of the purchase of South Behar Railway and Jorhet Railway property. The major portion of the money to be borrowed in the current year will be spent on works which will yield no income.

In reviewing the capital expenditure, the Retrenchment Committee of 1931 observed that the capital expenditure has been very lavishly spent since the separation of Railway Finance. During the first eight years from 1924 to 1931, Railways incurred capital expenditure of Rs. 113·25 crores on open line works against a total of 186 crores. The expenditure of 61 per cent. of the expenditure on replacements and renewals by fresh borrowing, at a time when the rate of interest was abnormally high, was not a sound financial policy.

In addition to the expenditure on open line works, the Railways spent 45 crores on new construction, the details of which are given in Appendix F to the Retrenchment Committee report. There are a dozen instances where expenditures have exceeded the original estimates by over 20 per cent. The Calcutta Chord Railway, Kangra Valley Railway and Kalyan Power House are some of the notable examples where actual expenditure was several times the original estimates *vide* Section (8). The result of imprudent expenditure was that the capital at charge which was Rs. 640·72 in 1924 increased to Rs. 784·48 in 1931 and the Railway budget was saddled with the additional interest charges amounting to 9·32 crores per annum. The

interest charges on commercial lines increased from 22·67 crores in 1924 to 32·09 crores in 1931.

These years were years of prosperity, and in spite of lavish and careless expenditure the Railways were able to discharge all their obligations and to build up a Reserve Fund amounting to 18·43 crores and a depreciation fund amounting to 19·12 crores. Depression began in 1930. The income of Railways began to fall and the Railways on account of the additional interest charges found themselves in great financial embarassment. The economy campaign at once began. The cut in salaries was imposed in 1931, but it was withdrawn after two years. The Reserve Fund was exhausted. The Railways stopped their contribution to general revenues, which is in arrears by 37·74 crores. They also borrowed Rs. 30·38 crores from the Depreciation Fund. The programme of capital expenditure was cut down. They stopped borrowing lavishly for unremunerative work. The Railways have not entirely overcome the period of depression. They have now become comparatively more considerate in their capital programme.

SECTION 2.

Budget.

Prior to the separation of Railway Accounts from general finance, the Railway Budget was included in the general budget and was laid before the Central Legislative Assembly (lower House) along with the budget of the country.

Since its separation in 1924, the Railway budget is discussed separately by the Assembly. The Finance Department still exercises control over the finances of Railways through the Financial Commissioner, who is an officer of the Finance Department. He is a member of the Railway Board and has thus dual functions to perform. He is the financial expert of the Railway Board and has also to watch the expenditure on behalf of the Finance Department.

The Budget is prepared and presented to the Standing Finance Committee for Railways in two instalments. The budget for the rolling stock is laid before the Standing Finance Committee in July and the rest of the budget in January.

Each Railway administration prepares its own budget in the month of December preceding the budgetary year (which is from 1st

April to 31st March). These proposals are sent to the Railway Board, and the General Managers with their staff discuss the budgets of their Railways with the Financial Commissioner and other members of the Railway Board in November. The budget for rolling stock is discussed earlier. All these estimates are consolidated together in one budget which is laid before the Standing Committee in the month of January. The Finance Committee consists of the Financial Commissioner (President) and 11 other members elected year after year by the Central Legislative Assembly. The Committee scrutinises the budget of individual Railways as well as the consolidated budget of all the Railways. The Financial Commissioner presides over the Committee to scrutinise the budget prepared by himself, and hence the work of the Standing Finance Committee for Railways becomes unreal. It ought to be presided over either by a non-official member or by the Hon. Member in-charge of Communications. The members of the Committee hold office for one year and hence there is no continuity in the work. The budget approved by the Standing Finance Committee is laid simultaneously before the Lower House by the Member in-charge of Railways, and before the Upper House by the Chief Commissioner for Railways.

The budget is discussed in both the Houses and the members are at liberty to criticise the policy and the details of administration. The Upper House is not invited to pass the budget, but the vote of the Assembly is necessary for passing it. The budget is presented in the form of demands and votes are taken on each demand. At the end of the period (four days) fixed for discussion, the votes are taken without discussion. The demand for capital expenditure comes at the end and it is very seldom discussed in the House. The permission of the Assembly for capital expenditure ought to be obtained separately in the form of a resolution, and not by Demands for Grant, which in fact are never discussed for want of time. Irregularities in capital expenditure would have been minimised, had it been discussed separately. For the sake of comparison I give below the Railway budgets for the years 1939-40 and 1925-26. I have selected 1925-26 for comparison, as it was in this year that the first Railway budget was laid before the Assembly by Sir Charles Innes on 20th February 1925 with these words :—"In our first year's budget, we are budgeting for gross receipts of 101 crores and for gross expenditure of 91 crores. If the estimates prove correct, there will be a gain of 10 crores from commercial lines."

(1) Only two days are allotted in the year 1940.

Budget for the year 1925-26.

Number of Demand.	Service to which demand relates.	Amount.
.....	A. EXPENDITURE FROM REVENUE	
	Commercial Lines	Rs (In lakhs)
1	Railway Board ..	9·08
2	Inspection	1·11
3	Audit ..	6 16
4	Working expenses : Administration ..	11,92·00
5	Working expenses : Repairs, maintenance and operation ..	42,26·47
6	Companies' and Indian States' share of surplus profits and net earnings .	1,33·50
9	Appropriation to Depreciation Fund ..	10,73·25
10	Appropriation from Depreciation Fund ...	9,50·00
11	Miscellaneous ..	6·65
12	Appropriation to the Reserve Fund ...	3,28·43
13	Appropriation from the Reserve Fund ...	.....
14	*Strategic Lines* ...	1,82·00
	B. EXPENDITURE CHARGED TO CAPITAL.	
	Commercial Lines ...	.....
7	New construction ...	6,16·70
8	Open Line Works ...	16,10·65
15	*Strategic Lines* ..	28·20

Budget 1939-40.

Number of Demand.	Service to which demand relates.	Amount.
	INCOME.	Rs. (In lakhs)
	Passengers Traffic Earnings :—	
	(*a*) Upper Class ..	3,14·15
	(*b*) Third Class ...	24,21·50
	Other coaching Traffic earnings ...	4,86·50
	Goods Traffic earnings ...	64,31·10
	Sundry other earnings ...	1,87·25
	Rupees Ninety-Eight Crores forty lakhs and fifty thousands ...	98,40·50
	EXPENDITURE.	
1	Railway Board ...	14·05
	Audit ...	16·90
3	Miscellaneous expenditure ..	30·55
5	Payments to Indian States and Companies ..	3,12·25
6 (*a*)	Working expenses—maintenance of structural works ...	7,80·00
(*b*)	Working expenses—maintenance and supply of locomotive power ...	17,83·00
(*c*)	Working expenses—maintenance of carriage and wagon stock .	5,99·50

Number of Demand.	Service to which demand relates.	Amount.
		Rs. (In lakhs.)
(*d*)	Working expenses—maintenance and working of ferry steamers and harbours .	27·50
(*e*)	Working expenses—expenses of Traffic Department ...	10,02·00
(*f*)	Working expenses—expenses of General Departments ...	4,09·00
(*g*)	Working expenses—miscellaneous expenses...	4,28·00
(*h*)	Working expenses—expenses of Electrical Department ...	3,82·00
7	Working expenses—appropriation to Depreciation Fund ...	12,58·00
8	Interest charges ..	28,95·85
9	Temporary withdrawals from Depreciation Fund ...	.....
10	Appropriation to Reserve ..	.....
10-A	Withdrawal from Reserve ...	.....
11	New Construction ...	80·00
12	Open line Works ...	10,20·00
		1,10,38·61

The capital expenditure includes the purchasing value of South Behar Railway (76 miles) amounting to £684,580, and a part of the renewal and replacement and it is met by fresh borrowing. A portion of the renewal is paid out of the Depreciation Fund.

The budget shows a surplus of 213 lakhs which is paid to general revenues as part-payment of the contribution fixed by the Convention of 1924.

At the end of the year the expenditure is scrutinised by the Public Accounts Committee which records the irregularities in the expenditure. It also reviews the report of the Auditor General on the Railway expenditure. The report of the Public Accounts Committee is subsequently discussed by the Legislative Assembly. But in spite of all these precautionary measures the control of the Legislature is not sufficiently effective specially in capital expenditure. The percentages of the expenditure under various heads for Indian and foreign railways are given in appendix III.

Accounts and Audit.—The Retrenchment Committee of 1931 drew attention to abnormal increase in the expenditure on Accounts and Audit in the following words :—"The growth of expenditure on accounts and audit taken together is staggering whether taken by itself, or in comparison with the growth of mileage, or the receipts and expenditure accounted for and audited by this establishment, or of other railway expenditure which is most analogous to it, namely charges included under the head 'General Administration'. The expenditure in 1930-31 is 151 lakhs, and it is 47¼ (or 46 per cent) higher than the expenditure in 1924-25 ; the increase in general administration charges (excluding accounts) in the same period is only 20 per cent ; the total value of the transactions accounted for, taking traffic receipts, working expenses and capital expenditure together, has varied only to a negligible extent."

Separation of accounts from audit.—The separation of accounts from audit was introduced on different railways on different dates : on the East Indian Railway from 1st December 1925, on the E. B. R. from 1st April 1930. The separation was introduced in the interest of economy. When the proposal for the separation of Audit and Accounts was laid before the Assembly, the Government of India gave an assurance that the total cost of Audit and Accounts under the separated system would be less than the cost of the combined Audit and Accounts Department. It was the question of economy more than any other factor which moved the Assembly to accord its support to the scheme of separation. The expectations of economy have been entirely falsified by subsequent experience. The Retrenchment Committee did find that expenditure increased by such separation and recommended their re-amalgamation.

SECTION 3.

Depreciation Fund.

The present system of debiting the cost of renewal and maintenance of track, rolling stock and buildings partly under Revenue income, partly under Depreciation Fund, and partly under capital, is unsatisfactory. It is difficult to decide with accuracy under which head a particular expenditure is allocated. No two persons will agree as to the classification of any expenditure under proper heads and the same person will have a different opinion at different times. (1) The cost of abandoned projects and purchase of branch line shares was debited to the Depreciation Fund in 1937-38 (*vide* Administration Report, Page 175) In previous years the amounts were charged under capital. This differentiation is as difficult to determine as it is unnecessary to maintain.

I first outline the history of the Depreciation Fund (*vide* Review by the Financial Commissioner of Railways on the appropriation accounts of the Railways in India for 1934-35.)

Origin of the present arrangements.— Prior to 1875, renewal reserve funds existed on several of the old guaranteed railway companies, but in that year these funds were abolished as it was considered to be unfair to the State. The interest was guaranteed by State and the companies showed smaller profits by crediting larger amounts under these heads. Thereafter the procedure was to charge to the revenues of the year the portion of the actual expenditure on renewals and replacements which was not chargeable to capital This is the practice in other countries. The question of instituting a Depreciation Fund to provide for renewals came into prominence again after the Great War and it was the serious and unavoidable postponement of renewals of permanent-way and rolling stock during the war that made it so important. The Acworth Committee in paragraphs 67 to 71 of their Report commented strongly on the failure of the Government of India to establish during the war such a reserve which could have been drawn upon later on when materials were available.

The Finance Committee in December 1921 recommended that early steps should be taken to calculate the rates of depreciation for different assets. The Inchcape Committee in their report in the beginning of 1923 emphasised the view that it should be laid down that each railway should make adequate provision every year for the maintenance and renewal of its permanent-way and rolling stock, and that the funds so earmarked should be debited to working expenses and carried to suspense account, which could be drawn upon as necessary to meet current requirements and expenditure, the balance being carried forward from year to year.

The Depreciation Fund was actually started in 1924; soon after the separation of Railway Finance from the General Finance. The normal life of each class of asset was fixed and its depreciation was determined by dividing the cost by its life. The normal life of each asset fixed by the Railway Board was as follows :—

CLASS OF ASSETS.	NORMAL LIFE.
	YEARS.
Bridge work ...	60
Bridge work (Masonry) ...	125
Rails and fastenings ...	60
Points and Crossings .	40
Sleepers, wood ...	15
Sleepers, Iron ...	40
Building Masonry ...	200
Plant ...	20
Locomotives ...	35
Boilers ...	25
Wagons ...	30
Electric Plant ...	10
Domestic Electric Appliances ...	5
Fans ...	25

The calculation became very elaborate and in the year 1935 it was agreed that depreciation should be fixed at 1/60th of the capital at charge in the previous year, which was said to be the amount of depreciation obtained by the calculation according to the age of the asset. The author in his speech before the Legislative

Assembly on 20th February 1935 objected to the fixation of 1/60th of the capital in Depreciation Fund. It was unduly large, being 24 per cent of the working expenses and 14 per cent of the gross income.

The question of providing for arrears of depreciation was considered at the time the Fund was started, but it was found that the calculation would be very laborious and inaccurate. Though the theoretical arrears of depreciation have not been worked out, attempts have been made to work out how much railways were in arrears with regard to renewals. The Depreciation Fund Committee calculated that the amount of such arrears on 31st March 1922 was nearly 20 crores. This took into consideration the immediate requirements of principal railways for their future programmes owing to obsolescence, restrictions on renewals during the war period, etc. The Inchcape Committee took provisionally 18½ crores as the amount of arrears which railways should attempt to pay to a reserve in about 5 years. This was an estimate of the amount by which expenditure on renewals during the war period fell short of what would normally have been spent. After careful consideration the Government of India decided not to impose on railways the liability of providing for arrears within a specific period. The liability for providing, if necessary, for arrears of depreciation is one of the first charges on the railway reserves according to the Separation Convention, but it has not been necessary to use the reserve for this purpose. The Depreciation Fund scheme finally adopted for Indian railways came under review in 1926-27 by Sir Arthur Dickinson, who investigated the system of accounting, audit, and statistics on Indian Railways. His recommendations, which are summarised in paragraph 288, Chapter XIII, of his report, are given below for ready reference : —

"1. That the principle of setting up each year a charge to revenue and a credit to Depreciation Fund to represent the estimated accruing renewals on each class of railway property is sound.

"2. That the sums so set aside should be based upon the estimated life of the property and the original cost less estimated value of scrap to be recovered but that in no case should a greater life than 50 years be allowed for any railway property, while in the case of electrical apparatus the maximum should be 25 years.

"3. That when renewal or replacement takes place, the original cost should be charged to Depreciation Fund and the balance above or below original cost should be debited or credited to a renewals account in the appropriate abstract to be included under the main head of Depreciation.

"4. That the cost of excess capacity enabling increased revenue to be earned should be charged to capital account.

5. That the realised surplus over original cost, less accrued depreciation, resulting from the disposal of a fixed asset should

be credited to a capital reserve account, to which should be charged any losses due to sales of similar assets for sums less than the difference between the original cost and the amount standing to the credit of Depreciation Fund in respect of those Assets."

The following table gives the amount credited to and taken from Depreciation Fund annually for renewals and replacements :—

Railway Depreciation Reserve Fund.

Year.	Appropriation to Fund.	Withdrawals towards renewals and replacements.	Net Reserve.
	(Rs. in crores)	(Rs. in crores)	(Rs. in crores.)
1924-25 .	10·35	7·29	3·06
1925-26 .	10·67	7.99	2·68
1926-27 ..	10·89	8·05	2·84
1927-28 ...	11·38	10·95	·43
1928-29	12·00	9·60	2·40
1929-30 .	12·59	11·76	·83
1930-31 ...	13·07	11·39	1·68
1931-32 ...	13·46	8·26	5·20
1932-33 ..	13·77	6·35	7·42
1933-34 ...	13·56	8·07	5·49
1934-35 ..	13·72	8·66	5·06
1935-36 ...	13·26	9·16	4·10
1936-37 ...	13·17	7·88	5·29
1937-38 ...	12·59	8·00	4·59
1938-39 ...	12·56	7·52	5·04
1939-40 ...	12·60	6·27	6·33
	199·86	137·20	62·46

These figures indicate that we deposited 200 crores in the Depreciation Fund during the last 16 years and our average expenditure on renewals and replacements is about 8¾ crores per annum. We have thus built up a reserve under the name of Depreciation Fund, now amounting to 62·66 crores out of which 30·38 crores were given to the Railways as loans to meet deficits in the year 1931 to 1936.

The present system of building a reserve of indefinite amount under the false name of Depreciation Fund is unfair to the tax-payers, unfair to Railway Administrations, and unfair to Railway employees. It is unfair to the tax-payers for this reason that according to para 3 of the Convention of 1924 (*Vide* Chapter I, Section 7) surplus can be credited to reserve fund after discharging the Railway's obligations to General Revenue ; but by including it in the Depreciation Fund, the amount is credited, even if Railways are unable to give their fixed contribution to General Revenues. The Depreciation Fund should now be abolished, and the reasons for its abolition now are the same as were given in 1875 for the abolition of Depreciation Fund as it then existed. It is unfair to Railway Administrations and to Railway employees as by including contributions to the reserve in the working expenses under the false name of Depreciation we show an artificial deficit. The operating ratio is increased which is a slur on administrations and it results in retrenchment and reduction, and cut in salaries not for real deficit, but for artificial deficits created by wrong higher finance. The writer drew the attention of the Legislative Assembly to this question on 17th February, 1938, in the following words :--

" I come to the question of the Depreciation Fund. For the last three years I have been pressing very hard that the system of Depreciation Fund is wrong. It is contrary to the practice of other countries and it is bad accountancy, because it has been really used as a reserve fund from which they have always been drawing to pay for their deficits. May I just remind my Honourable friend that when Sir Joseph Bhore quoted the working ratio of different countries he said that he could not make out whether those figures were with or without depreciation. This clearly shows that there is no difference in the working ratio with and without depreciation in foreign countries. I also had an opportunity to discuss this matter with the General Secretary of the International Union of Railways in Paris, and he could not understand why there should be an enormours difference between the working ratio in this country with and without depreciation."

In the following year I pressed the point again in the following words :--

" I take the question of the Depreciation Fund. It is called

the depreciation reserve fund. It is neither a depreciation nor a reserve fund. It can more appropriately be called a bank deposit. They have arbitrarily fixed up 1/60th of the capital at charge and they call it Depreciation Fund. It works out to be 12½ crores per annum. Money spent in renewals and repairs is divided into three parts. One part is debited to the account of depreciation, one part under the account of the Working Expenses and one part is called Capital Expenditure and is met by fresh borrowing. Now, to allocate the portion of these three divisions, we require three highly paid accountants which the Railway Board provides for this work. May I ask whether such a big amount is kept in the Depreciation Fund anywhere outside India? If the Railway Board do not deposit four crores a year in this way, they will be able to pay four crores to the general revenues in payment of their obligations. Are you going to increase this fund for an indefinite time to an indefinite amount? Is it the idea that when an earthquake shatters all these Railways, you will require several hundred crores from this fund to rebuild our railways *de novo*? The idea of building up indefinite reserve is against the practice of every other country in the world. Why don't you set apart a necessary amount for renewals and repairs? Why first deposit in Depreciation Bank and then withdraw from it? Why don't you adopt a simple policy, a policy adopted by all the Railways of the world, that all the expenditure which is not of a paying nature and on which there will be no income, should be debited to revenue account and the expenditure, which is going to yield some income ought to be debited to the capital account and paid out of borrowed sum This is a simple division which everybody can understand and you need not have an army of expert accountants to allocate the division artificially made by them."

SECTION 4.

Reserve Fund.

Every prudent administration keeps a Reserve Fund to meet deficits in the years of depression. It avoids borrowing at inconvenient rates of interest or retrenchment leading to inefficiency. The Convention of 1924, referred to in Section 7, Chapter I, provided that any surplus remaining after discharging its obligations to general revenues shall be transferred to a railway reserve: provided that if the amount available for transfer to the railway reserve exceeds in any year three crores of rupees, only two-thirds of the excess over three crores shall be transferred to the railway reserve and the remaining one-third shall accrue to general revenues. The Government of India established the Reserve Fund and accumulated 18·43 crores in five years. The accumulated sum was all spent

during the period of depression that commenced from 1930. The following table will show the condition of the Reserve Fund.

Reserve Fund.

Years.	Appropriation to Reserve Fund.	Withdrawal from Reserve Fund to meet the deficit of working expenses.	Balance.
	(Rs. in crores.)	(Rs in crores.)	(Rs. in crores.)
1924-25 ...	6·38	·38	6·00
1925-26 ..	3·79	.	9·79
1926-27 ..	1·19	...	11·28
1927-28 ...	4·57	.	15·85
1928-29 ..	2·58		18·43
1929-30 ..		2·08	16·35
1930-31 ..	..	10 93	5·42
1931-32 ..		1·95	·47
1932-33 .	..	.	·47
1933-34 ..	...	...	47

The Wedgwood Committee in para. 210 of its report said: "We consider it essential that, in addition to making adequate provision for depreciation, the railways should build up a general Reserve Fund as soon as their financial position permits them to do so. Its primary object would be to serve as an equalisation fund to which appropriations would be made in good years, and from which withdrawals could, if necessary, be made in bad years, when interest charges were not fully earned." It appears that the Railway Administration aims at transferring the function of the Reserve Fund to Depreciation Reserve Fund, which is not a correct policy. Depreciation Reserve can be spent only on replacements and renewals, but an equalisation fund can be utilised for any item including payment of salaries.

It is highly desirable that the Depreciation Reserve Fund should be closed, and a sum of nine crores be provided in the budget for renewals and replacements which is in excess of the average expenditure of the last 15 years by half a crore, and the amount of 32·28 crores now available under the head of Railway Depreciation Reserve Fund be transferred to Equalisation Fund. We should aim at increasing the amount to 60 crores and not to 50 as recommended by Wedgwood Committee. Sixty crores approximately represents the excess expenditure, which the Railways incurred during the years of depression from 1930 to 1937.

Persons in charge of Railway Finance may not support the proposal on the ground that it is against the prudent policy of a good business concern ; but the real argument, at the back of their mind, will be entirely different. We know that the appropriation to depreciation fund has priority to the contribution to general revenues, but appropriation to Reserve Fund can only be made after fulfilling the obligation to general revenues. The income at present is not sufficient to discharge the entire obligation to general revenues and no amount can be deposited in the Reserve Fund. I would rather change the convention than allow it to be annulled by financial dodges.

SECTION 5.

Contribution to General Revenues.

Till the separation of Railway Finance in 1924, the income of Railways formed part of general revenues, and the Government of India spent as much money as the other requirements of the country permitted. During the Great War, when most of the normal expenditures were suspended, the Railways suffered most heavily. The Convention of 1924 fixed the amount of contribution to one per cent of the capital at charge plus one-fifth of surplus profit. The loss on strategic lines was to be deducted from the contribution. It was also provided in para. 2 of the Convention that if in any year railway revenues are insufficient to provide the contribution, surplus profits in the next or subsequent years will not be deemed to have accrued for purposes of division until such deficiency has been made good. The following table gives the Contribution to General Revenue :—

Year.	Amount accrued under clause (2) of Convention.			Amount deducted to meet the loss of the strategic lines.	Net contribution.	Amount actually paid to general revenues.	Arrears.
	1 p.c. of capital at charge.	one fifth surplus profit.	Total.				
	(Rs. in lakhs)	(Rs. in lakhs)	(Rs. in lakhs)	(Rs. in lakhs)	(Rs in lakhs)	(Rs. in lakhs)	(Rs. in lakhs
1925-26	540·43	89·99	630 42	120·90	509·52	549	...
1926-27	580·75	178·90	759 65	158 79	600·86	601	
1927-28	600 36	94 85	695·21	146·27	548·94	628	...
1928-29	630·00	56·61	686·61	163·42	523·19	..	523·00
1929-30	662·32	118·26	780·58	168·72	611·85	.	612·00
1930-31	693·73	51·34	745·57	172 00	573·67	.	574·00
1931-32	723·54	...	723·54	187·51	536·02		536·02
1932-33	735·94	..	735·94	213·35	522·58	...	522·58
1933-34	723·81	..	723·81	201·94	521·87	..	521·87
1934-35	722·45	...	722·45	207·79	514·65		514·65
1935-36	720·70	...	720·70	200·10	520·58	..	520·58
1936-37	721·56	...	721·56	230·63	490·93	...	190.93
1937-38	716·63	..	716·63	247·71	468 32	2·76	192·32
1938-39	683·00	..	683·00	240·23	442·77	2·05	237·77
1939-40	685·33	.	685·23	235·05	450·28	2·13	237·28
				Total arrears . 37,74,00,000			

The first Railway budget separate from general budget was presented in 1925 and, during the last 15 years, the contribution

to the general revenues under the Convention amounted to Rs. 108·49 crores, of which 41·81 crores were paid direct to the general revenues, 28·94 crores to the Military Department for loss in strategic lines on behalf of general revenues and there still stands 37·74 crores in arrears, which the Railways according to the Convention should pay to the general revenues in years of prosperity, before crediting any amount to the Reserve Fund.

SECTION 7.
Operating Ratio.

$$\text{Operating or working ratio} = \frac{\text{Expenditure} \times 100}{\text{Income}}$$

The economy and the efficiency of Railways are judged by the operating or working ratio. It is the incidence of expenditure. Working expenses exclude interest charges, contribution to companies or to the Government, and contributions to Reserve Funds; but they do include expenditure incurred on renewals and replacements and taxes. The Indian Railways appropriate a large sum of money to Depreciation Fund, which is partly depreciation proper and partly Reserve Fund, and hence they have two working ratios and both are misleading. In fact Depreciation Fund in the sense in which we understand the word, does not exist in any country outside India.

Comparisons of operating ratio will indicate that Indian Railways are run very economically. In fact the economy is effected at the sacrifice of efficiency. The salaries should be so regulated that the Railway employees may live without temptation and they should be given sufficient leisure for self-improvement and recreation. From the comparison of operating ratios of various countries I have come to the conclusion that 68 per cent is a good working ratio in a normal year, which should be calculated by including that portion of Depreciation Fund which is actually spent in the year on replacements and renewals. A ratio above 68 per cent indicates mis-management and extravagance, and below 68 indicates dissatisfaction and inefficiency. In the table below the operating ratios are taken from the Administration Report 1937-38, Vol. I, page 20.

The calculation given in the last column is my own. It is the correct working ratio, which I obtained by including that portion of Depreciation which is spent on renewals and replacements.

The formula for calculating last column is the operating ratio without depreciation plus $\frac{\text{portion spent on renewal}}{\text{total depreciation}}$ multiplied by the difference of the two ratios. Let r_1 be the working ratio without and r_2 with depreciation fund. The true working ratio is $r_1 + \frac{r_2 - r_1}{D} X$, X is the amount spent on renewal and D appropriation to Depreciation Fund. The formula is the principle of proportional parts.

Years	Percentage excluding depreciation	Percentage including depreciation	Percentage including the portion of depreciation which is spent on renewals and replacements.
1930-31 ..	57	71	69·20
1931-32 .	56	72	65·82
1932-33 ...	57	74	61·85
1933-34 ...	56	72	65·52
1934-35 ..	55	70	61·46
1935-36 ...	55	70	65·36
1936-37 ...	52	66	60·37
1937-38 ...	52	65	60·26

As a result of retrenchment and lowering the scale of salaries the working ratio has gone down to 60 per cent which is lower than in Japan even.

The following table will give the operating ratio of different countries in the year 1931 :—

State Railway, Algeria	..	154·86
Germany	...	94·12
Belgium	...	97·81
Denmark	...	102·80
France (State Railway)	.	110·85
France (P. L. M.)		94·88
Great Britain		81·25
Greece (State)		107·56
Italy		92·73

Japan		61·77
Switzerland (Federal Railway)	...	72·74
National Canadian	...	91·43
United States		74·43
South Africa		80·20
India		65·03

The working ratio of India is the lowest except that of Japan. The Indian Railways pay no tax, while most of the Railways in other countries pay taxes which are included in the working expenses.

The operating ratios of different Indian Railways are given below :—

Railway.	1929-30	1932-33	1934-35	1935-36	1936-37
Eastern Bengal ..	56·7	64·8	62·8	68·5	63·2
East Indian (including South Behar)...	52·0	51·2	49·6	49·4	47·4
North Western ..	63·2	62·1	60·2	57·5,	51·7
Great Indian Peninsula	58·1	59·3	56·1	53·9	48·7
Assam Bengal ...	55·2	65·4	64·0	70·4	63·5
Bengal Nagpur .	62·0	69·0	63 3	62·7	63·1
Bombay Baroda and Central India ..	53·2	52·2	49·4	47·9	45·9
Lucknow-Bareilly ...	41·1	42·8	39·6	38·3	38·4
Madras and Southern Mahratta (including Mysore State) ..	43·3	49·5	50·1	52·3	48·5
South India (including Travancore) .	45·5	49·9	51·8	55·2	52·3
Tirhoot ...	31·6	39·9	43·2	43·4	41·4

SECTION 8.

Loans and Interest Charges.

Railways do not borrow money directly Loans are raised by the Government of India on behalf of the Railways at the current rate of interest. The Railways pay to the general revenues the interest on the proportionate share of their loan. No attempt is made by the Railways to pay back the loan and no provision is made for it in the budget. In fact debts increase year after year. All capital expenditure which includes new construction, purchase of new lines, and part of the expenditure on renewals and replacements, is met by fresh borrowing. The loans include the following catagories of debts :—

(1) Loans taken through the Government of India to meet current and capital liabilities. These include loans taken by the Government for definite Railway purposes called specific debts, which are raised at definite rates of interest.

(2) Loans taken from the Indian States and the Provincial Governments.

(3) The annuities fixed at the time of the purchase of different Railways. The payment of cash price was fixed in the form of annuities.

Capital expenditure taken as loan through the Government till the end of the year 1939-40 and spent on State owned Railways is as follows :—

(In crores of Rupees)

1.	State Railways worked by the State ...	429·92
2.	State Railways worked by the Companies	291·52
3.	Abandoned projects ...	·32
	Miscellaneous .	2·28
4.	Stategic Lines ...	34·02
5.	State Railway collieries	1·79

In addition to the loan taken from the Government of India, the Railways have further commitments :—

1.	Contributed by Companies in shares and stock .	35·73
2.	Contributed by Indian States ...	1·65
3.	Contributed by Provincial Governments ..	·14

4. Annuities which are as follows :—

	£
East Indian Railway Annuity terminating in 1953 ...	13,365,137
Eastern Bengal Railway Annuity terminating in 1957 ...	1,663,804
Sind, Punjab and Delhi Railway Annuity terminating in 1958 ...	5,490,299
Great Indian Peninsula Railway Annuity terminating in 1948 ...	12,483,866
Madras Railway Annuity terminating in 1956 ...	6,852,943
	39,856,049

The question as to what extent the annuities be included in the capital at charge, is not decided.

Conflicting views have been expressed as to the actual amount which should be included in the Railway capital at charge in respect of these annuities which are part of the total liability involved in the purchase of Railways. One view is that the amounts repaid by Railways before the separation of finances should be neglected and for the purpose of Section 187 (1) of the Government of India Act, the amounts redeemed before 1924-25 should still be included in the capital at charge.

The other view is that, taking the position at the end of 1934-35, only £46·808 million should be so included, *i.e.*, the amount redeemed from general revenues between 1924-25 and 1934-35 should be taken in reduction of the liability.

The purchasing value of the annuities in a particular year is the capital at charge in that year. The annual payment made in previous years included the interest on the purchasing value and part-payment of capital. The former should be included in interest charges and the later under a new heading 'Avoidance of debts'. The rate of interest throughout the calculation should remain uniform and should be the same as that at which the amount of annuities was first determined.

The following table gives the interest charges of all descriptions during the last 16 years; the figures for Burma Railway are excluded from the table :—

Year.	Interest charges.
	(In crores of rupees)
1924-25 ...	22·98
1925-26 ..	23·82
1926-27 ...	24·83
1927-28 ...	26·15
1928-29 ...	28·10
1929-30 ...	28·87
1930-31 ...	31·13
1931-32 ...	31·46
1932-33 ...	31·40
1933-34 ...	30·03
1934-35 ...	30·31
1935-36 ...	29·92
1936-37 ...	29·39
1937-38 ...	29·26
1938-39 ...	29·28
1939-40 ...	28·96

The interest charges consist of the following items :—

		£
1.	Interest on sterling debt ...	4,309,818
2.	Interest on Capital contributed by companies	
	(*a*) on share capital ...	420,000
	(*b*) on debenture ...	459,089
	Total (in sterling) ..	5,188,907
	Equivalent to ...	Rs. 6·88 crores
3.	Interest on capital provided by the Government ...	22·31
4.	Interest on rupee debt ...	·07
	Total ...	Rs. 29·26 crores

(Administration Report 1937-38, Vol. II, p. 6.)

SECTION 9.

Capital Expenditure.

It is universally admitted that Indian Railways are over-capitalised. The causes of over-capitalisation are as follows :—

(*a*) The Government of India purchased different railways at different times as described in Section 2, Chapter I; and they paid £33,885,943 over and above the cost price as a premium which, according to the present rate of exchange, is equivalent to 45·18 crores, and equal to 50·85 according to the then rate of exchange.

(*b*) India paid the companies at the prescribed rate of exchange and the loss due to exchange is 8·41 crores.

(*c*) The premium paid in purchasing the branch lines at the time of purchasing various branch lines is 8·16 crores.

(*d*) Certain railways and collieries have been given up and they are no longer worked at present. Wastage for constructing those lines and collieries is 1·49 crores.

(*e*) In addition to these, the railways spent various sums at which a certain percentage was expected but this expectation has not been materialised. The details of this are published in appendix F of the Railway Retrenchment Committee Report. In paragraph 119 the Committee said :—"The total expenditure on new construction from 1924-25 to 1930-31 is over 42 crores, and it is the interest charges on this capital and on the capital sunk on Open

Line Works—which amounts to over 105 crores in the same period (exclusive of 15 crores for the purchase of existing lines)—which have contributed to a great extent to the condition in which railways find themselves at present. We consider that this ought to be a lesson to the Railway Board for the future."

The amount of 42 crores spent on new construction instead of yielding the expected return of 6 per cent gave a return of about 1 per cent, and major portion of this capital is a wastage as most of these lines may be dismantled. One important feature of these new constructions is the incorrect system of preparing the estimates, and over a dozen instances of under-estimates were brought to the notice of the Retrenchment Committee. The Committee drew particular attention to the Calcutta Chord Railway which was originally estimated to cost 180 lakhs and is now estimated to cost 320 lakhs, and the Kangra Valley Railway which was started on an estimate of 134 lakhs and is now expected to cost nearly 300 lakhs. The accounts were all burnt before they were audited. Kalyan Power House is another example of extravagance. The fourth example of extravagance which I would like to mention is that of the Cawnpore Railway Station, which was estimated to cost about Rs. 80 lakhs, but now it costs over one crore.

(*f*) There is one more reason for over-capitalisation. Renewals and replacements which ought to have been paid out of the revenue account directly or through Depreciation Fund are now debited to the Capital account and are paid by fresh borrowing. This system of accountancy reminds one of the story of a person who purchased a pair of shoes for 7*s*. 6*d*. and resoled it three times at a cost of 2*s* 6*d*. each, claiming that the sole each time was better than the previous one. He then claimed 15*s* as the capital value of the pair of shoes. When asked to determine the present value of his over-capitalised pair of shoes, he with a feeling of self-sacrifice, expressed willingness to accept 11*s*. 6*d*. The same would happen to our Railways, if their present value is evaluated. The excess capital will be treated as bad debt and the interest will be paid by the general revenues of the country. Whether we write it off or not the burden will fall on the tax-payers of India. Whatever may have been the system of accountancy in the past it is desirable that Railways should not be saddled with unnecessary capital expenditure on which interest charges are paid. The principle in future should be that all fresh expenditures yielding income should be debited to capital account, and the

expenditure intended only for improvements but yielding no additional income should be paid out of the Revenue Account.

The capital of State Railways on 31st March 1937 was 788·87 crores of which 37·39 crores was contributed by companies and Indian States and the balance 751·48 represents the capital at charge on which the contribution to general revenues is calculated. The loan was raised partly in rupees in India and partly in sterling in England at different rates of exchange. Rupee loan is 456·27 crores, and sterling loan converted into rupees is 297·21 crores. The capital of 788·87 was drawn from the following sources :—

		Rs. (in crores.)
1.	Direct Government outlay ...	576·43
2.	Expenditure charged to Famine Relief and Insurance ...	7·87
3.	Liabilities involved by the purchase of Railways not yet discharged ...	161·09
4.	Money provided by the Central Provincial revenues (regular contribution from general revenues was stopped) ..	6·09
	Total ...	751·48
	Contribution of Indian States and Companies	37·39
	Total ...	788·87

The capital at chage includes :—

(*a*) The unspecified loan raised by the Government of India for which an average rate of interest is paid which was 4·76 in 1937-38.

(*b*) Specified loan raised specifically for railways at a given rate of interest.

(*c*) The present value of annuities.

(*d*) The amount contributed by Local Governments or by the Indian States.

(*e*) The amount contributed by the companies in the form of shares or stocks.

It should not include the amount contributed by revenue account, by Famine Relief Fund or by any charitable society on which no interest is claimed. These should be excluded for the same

Foot-note --Finance and Revenue Accounts of the Government of India 1937-38, statement 15C, p. 148-149.

reason as the capitalised value of land given free by the Government or by Indian States is not included in the capital.

SECTION 10.
Variable Charges or Dependent Cost and Constant or Fixed Charges.

The cost of service may be divided into two catagories called *(i)* Constant or Fixed Charges and *(ii)* Variable Charges or Dependent Cost. The former includes station, signalling, track and office expenses which are independent of the quantum of traffic, a percentage of capital expenditure and of the use of capital; while the latter would include the additional cost of haulage and dependent services together with the depreciation of track and bridges. The knowledge of variable and constant charges is essential for the scientific theory of Rates and Fares.

It is often suggested that freight rates should be charged at a fixed scale, based upon either the cost of the service or the distance of conveyance, but the universal experience is that these bases are impracticable. The suggestion usually is, that the charge for transport should be the working expenses incurred, plus a uniform percentage addition for remuneration of capital. The inequity of this method of ascertaining cost has already been considered, and the effect on the prudent company, which has spent capital to reduce working expenses--say in reducing a gradient or in electrifying a line--need not be laboured. But assume this defect is removed, and it is proposed to charge for conveyance the actual working expenses with an addition for capital; calculating the latter not as a percentage of working expenses but as a percentage of capital expenditure. It will be found that a large proportion of the cost of the service, including use of capital, is represented by the constant element of fixed charges, and this proportion may be taken as about 70 per cent., the variable charges representing 30 per cent. If, therefore, the service of 100 units of traffic costs £100, the cost of 80 or 120 is not £80 and £120 respectively, *e.g.*:—

	100 Units	80 Units	120 Units
	£	£	£
Fixed charges	70	70	70
Variable charges	30	24	36
	£100	£94	£106
Cost per unit	20s.	23s. 6d.	17s. 8d.

(See Railways W. V Wood and Sir Josiah Stamp)

The Railway Retrenchment Sub-Committee in paragraph 48 of their Questionaire mentioned :—

"A certain portion of the railway expenditure is stated to be constant and the rest variable with the traffic offering. The Committee would like to have a statement approximately allocating the working expenses of each major railway under these two heads for the years 1913-14, 1924-25 and 1929-30, indicating the items entering into these categories."

The investigation has been made in respect of four major railways and the results are given below :—

Railway.	1913–14		1924–25		1929–30	
	Constant.	Variable.	Constant.	Variable.	Constant.	Variable.
N.W.R.	50	50	50	50	54	46
E.I.R.	55	45	53	47	57	43
G.I.P.R.	49	51	47	53	53	47
E.B.R.	58	42	60	10	60	40

A note was prepared for the Railway Board by Mr. Outhwaite, Statistical Officer of the E. B. Railway bringing out the economic, mathematical and practical aspects of the theory of variable or dependent costs and explaining the general lines which have been followed in order to arrive at an estimate of the constant and the variable costs on four of the major railways. It is shown in Mr. Outhwaite's note that Railway statistical experts ordinarily estimate dependent costs on railways at a figure varying between 40 and 50 per cent of the total operating costs and the Board are disinclined to put too much reliance on specific figures within those limits.

The proportion of constant charges is improving and it is desirable that we aim at the figure of 65 per cent or even higher. The diminution of rates and fares depends to a large extent on the low percentage of variable charges. Some Railwaymen are labour-

ing under the wrong impression that small traffic under higher rates is better than large traffic at lower rates, yielding the same income. It is the primary duty of Railways to develop commerce and industry and to increase the prosperity of the people without incurring loss to themselves. We should aim at attracting larger traffic, if it can be managed without incurring losses. The determination of constant and variable charges is the foundation on which the super-structure of rates and fares is built. The Universities are more competent to undertake the work than the Railway Department. This is one of the subjects which the students who are doing research work in Railway Economics should study. It is the basis of the scientific theory of Rates and Fares.

Suppose the rate of one maund is one rupee of which x rupees represent constant and $(1-x)$ variable charges. The rate on y maunds will be $x+y\ (1-x)$ *i.e.*, the rate per maund will be $\frac{x}{y}+(1-x)=1-x\ (1-\frac{1}{y})$.

This will be minimum if x is maximum. Therefore the rate per maund will diminish with increase in traffic and quantum of diminution will be greater if constant charges are greater.

CHAPTER V.

SECTION 1.

Gauges.

The total route mileage in India at present is 43,126 miles and the track is divided into the following gauges :—

(1) Broad Gauge (5'-6"), length 21,196 miles; it is called Standard Gauge.

(2) Metre Gauge (3'-3⅜"), length 17,772 miles.

(3) Narrow Gauge (2'-6" or 2'), length 4,158 miles.

The smaller gauges are constructed for special purposes, and the two principal gauges in India are (*a*) 5'-6" broad or standard gauge, and (*b*) metre gauge. The standard gauge in Europe and America is 4'-8½".

It was a great mistake to have adopted 5'-6" for the standard gauge in India. The introduction of the narrower metre gauge at a later period was the inevitable consequence of the mistake, because of the great cost of constructing the wider gauge. The question of gauge was examined by Mr. Robertson in 1901. At that time there were 14,312 miles broad gauge (5'-6") and 10,895 miles metre gauge. He said :—

"Now I do not think it will be disputed that two standards of gauge, each crossing and re-crossing the other, cannot, under any circumstances, be regarded as an unmixed blessing; but before any remedy can be suggested the relative advantages of the two gauges require to be considered." (p. 102).

In England, the width of a vehicle for the 4'-8½" gauge is 8'-6"; in America it is 10'-0"; and on the Continent of Europe 10'-6". In India the width of the carriages for the 5'-6" gauge is only 9'-6" or a foot less than on the Continental Railways and only a foot more than that on the English Railways. The width of the metre gauge carriages is 7'-9" or only 9" less than the 4'-8½" gauge Railways in England. The Indian 5'-6" gauge stock, therefore, is obviously insufficiently wide for the gauge.

To be relatively equal in width to the stock on the Continent, the Indian vehicle would need to be 12'-3" wide so that Railways in India have never obtained the full benefits of their wider gauge and are about 22½ per cent under power.

On the other hand, the width of the metre-gauge vehicle relatively should be 7'-4" so that the metre-gauge lines with vehicles actually 7'-9" wide, are really doing better proportionatey than even the Continental railways.

So far, therefore, as the merits of the two gauges are concerned, from an economic point of view, Mr Robertson was of opinion that there could be little doubt that the 5'-6" gauge railways were not so good a servant to the country as the metre guage. Mr. Robertson thought that uniformity of gauge was very desirable and after considering various aspects of the question he recommended the adoption of European and American gauge of 4'-8½"

This would require no change in the roadway of the broad gauge railways, and no reduction in the size of their rolling stock, it would also cost far less to convert the metre gauge to the [illegible] gauge than to convert it to the 5'-6" guage.

He suggested methods by which broad guage and metre gauge lines may most economically be altered into common standard gauge of 4'-8½". He definitely condemned the use of smaller narrow gauges in the following words:—"It would be an economic mistake, in my opinion, to encourage any development of the 2'-6" on the 2'-0" gauge into large systems. There seems to be a tendency in this direction at present, and unless it is checked, the Government will have on their hands the difficulty of a third gauge ramifying throughout the country and raising all the complications created by the introduction of the metre gauge." He also suggested that the width of the carriages without much cost can be increased by one foot. The Government of India did not accept this recommendation of Mr. Robertson, and allowed diversity and economic waste to continue. They failed to visualise the obvious advantage of adopting world standard gauge by which they could have utilised the most modern designs without violent changes.

The question of gauge was reconsidered by the Acworth Committee and it recommended a thorough investigation of the problem The Committee said (para 181) : "the situation as it exists at present must be faced as a broad problem effecting the whole of India, and examined from the engineering, operating and financial side by a special commission of two or three of the rate experts who can be found after careful search, not in one country alone."

Sir Henry Burt, a member of the Committee and ex-president of the Railway Board, dissented from this recommendation. He admitted that it was desirable to avoid a break of gauge and that

it was a mistake that such a broad gauge as 5'-6" was originally decided upon as the standard and that full advantage has not been taken of that gauge in determining the breadth of the rolling stock. Sir Henry thought that we should concentrate our attention to immediate economic requirements and not on the battle of gauges which has been fought out more than once in the past.

Sir Henry Burt's opinion prevailed and it was unfortunate that the Government of India could not facet he vested interests and they consented to the continuation of diversity and economic waste. It is a pity that the Government of India borrowed large sums of money for unremunerative capital expenditure (Chapter IV) and left this important improvement to be tackled by posterity (*vide* Tewari, pages 69—71 and Bell's "Railway Policy.")

SECTION 2.

Collieries and Purchase of Coal.

Several Railway Companies have been maintaing their own collieries and raising coal for their own consumption. (The Kurhurbaree and Serampur mines were first acquired in 1870). The income and expenditure on Collieries were included in the revenue accounts of the Railways concerned. During the years immediately following the war the price of coal went up very high. Railway stocks fell to dangerous depths and in 1920, when tenders were invited for coal, one of the biggest firms in Calcutta, which had been in intimate relationship with the railways in the past, refused to tender coal at any reasonable price which the railways could even consider. The Railways, therefore, merely as a measure of self-protection, were compelled to acquire their own collieries and this policy has been found to be completely successful. Not only have the Railways been able to obtain from their own collieries coal at cheaper rates, but the existence of these collieries and the knowledge that, if they were worked to their capacity, Government could obtain all or practically all their requirements, have had a most salutary effect on the prices at which the collieries tendered coal to Railways.† The general supervision of the mines and purchase of coal are regulated by the Chief Mining Engineer attached to the Railway Board and he is assisted by other officers and clerks.

Public attention to the problem was first drawn by a motion moved by Sir Abdul Halim Ghaznavi on 17th March 1932

†Speech by the Financial Commissioner in the Legislative Assembly, 9th August 1934

when he said :—" Will this House be surprised to hear that Government have not published the accounts of the cost of running their collieries in spite of repeated demands? My Honourable friend Mr. Das drew my attention to the fact that for many years the Public Accounts Committee urged this point, and only the other day they got them to prepare a form of accounting So, as regards the collieries, we have got nothing in our possession to show what is the cost of their running. I say that the State collieries are running at a much higher cost than even the costliest European-managed collieries. Will the House be surprised to hear that there is no tender ever called for raising coal in the State collieries."? He again moved a resolution on 22nd September 1932 and during its discussion the writer said :—"My attention was first drawn to this question by reading the report of the Public Accounts Committee and they pointed out that the balance sheet of the collieries owned by the railway were never published. I repeatedly drew the attention of the House on every occasion when I had a chance to speak on the railway problem and asked the Railway Member to tell us whether the State collieries are or are not paying concern and to present us with a balance sheet and profit and loss account so that we may be able to decide whether it is to our advantage to maintain these State collieries.' In reply to a question, Sir George Rainy said last time, if I remember right, that the balance sheet was seen by some business men. I hope that the Honourable Member for the Railways may lay the 'balance sheet shown to business men on the table and distribute it to every Member of the Assembly and if such a balance sheet is not circulated, then we will be forced to draw the inference which this fortnightly journal called 'Business' has drawn" The Journal said :—"The cost of coal per ton is estimated to be Rs. 4-13-0. The same quality of coal which is produced by the State collieries can be had in the market at Rs. 2 or Rs. 2-4-0 a ton, showing a loss of Rs. 52 lakhs 50 thousand yearly. That is about half a crore of rupees."

Sir Abdul Halim Ghaznavi again moved a resolution on 9th August 1934 when he remarked :—

" Briefly speaking, India's immediately available productive capacity is something like 26 to 27 million tons, whereas the consumption of coal in India to-day will not exceed 18 million tons. India's power of coal supply has developed enormously, whilst the demand has fallen considerably." Mr. (now Sir) P. R. Rau, the then Financial Commissioner, opposed the proposal of closing down collieries and said :—" It has been calculated that the expenditure which will continue to be incurred if all our collieries were closed, but kept in good condition, will be in the neighbourhood of 41 lakhs a year, of which the interest is 20 lakhs, depreciation 7 lakhs,

minimum royalty 2 lakhs, necessary repairs and maintenance 4 lakhs and keeping the works in good condition 8 lakhs. It means by closing down all our collieries we shall lose about 20 lakhs."

On account of the pressure put by Public Accounts Committee and Legislative Assembly, the balance sheets are now regularly prepared and revenue account is laid before the Assembly.

The State now owns the following 13 collieries whose administration is vested in the Chief Mining Engineer attached to the Railway Board. Two of these collieries have suspended their work. The table on page 151 gives the names, the date of acquisition, and the capital at charge of the collieries. The capital invested in Railway collieries is about 4 crores on which interest is paid from Railway revenues. Eleven collieries which are now working raised 3·8 million tons against the total production of 23·2 million tons in India. The collieries are all running at a loss and there is only one colliery Bokaro which is showing a profit of 14·7 lakhs. The loss to Railway administration in the working of the remaining 12 collieries is 43 lakhs. There is, therefore, a net loss of 29 lakhs per annum.

Name of Colliery.	Owned by.	Year of Acquisition.	Capital advanced by Government (in lakhs of rupees.)	Coal produced in tons.	Loss (in thousands of Rupees.)	Supervision (in thousands of Rupees.)	Interest.	Sinking Fund.
Kargali ..	G. I. P.	1915	39·78	852·7	194·7	205·0	160·0	159·0
Bhurkunda ..	E. I., E. B., N. W.	1921	53·25	197·7	350·3	70·0	253·0	46·0
Kurhurbaree ...	E. I.	1870	33·92	253·8	386·0	190·9	75·0	140·2
Serampur ..	E. I.	1870	33·89	314·6	328·9	168 8	76·0	183·2
Bokaro ...	E. I. & B. N.	1912	27·88	1080·0	(1473 Profit)	101·0	115·0	101·0
Sawang ..	E. I. & B. N.	1920	15·06	64·5	67·7	19·7	78 5	8·4
Kedla (working suspended) .	E. I. & B. N.	1927	7 36	...	736		..	..
Religara ...	B. B. & C. I., M. & S. M.	1921	10·79	104·7	1980	...	...	...
Jarangdih ...	B. B. & C. I., M. & S. M.	1922	78·81	293·5	21·9	55·0	...	3·0
Kursia .	B. B. & C. I.	1925	13·20	130·0	·4	61·9	...	11·0
Talcher (Deulbera)	B. N.	1927	20·00	286·0	6·1	25·0	93·5	40·0
Argada ..	B. N.	1923	26·82	193·0	6·1	39 6	12·3	71·0
Talcher ..	M. & S. M.	1927	39·00	.	...	5·0	..	24·0

The amount invested in State collieries is 3·77 crores.

The total comsumption of coal by Class I Railways is 7·6 million tons and the total comsumption by all the Railways is about 9 millions of which Railway collieries contribute 3·8 million tons and the rest is purchased in open market. On account of distance from coal fields the average prices per ton are different in different Railways. The lowest price is paid by B. N. Railway *viz.*, Rs. 5·2 per ton and the highest Rs. 18 is paid by South India Railway. The following figures of the prices of coal paid by different companies will be of interest in the caculation of variable and constant charges.

B. N. R.	...	5·2 Rupees per ton.
E. I. R. . . .	...	8·8 ,,
E. B. R. . ..	.	14·8 ,,
B. B. & C. I. R. ...	..	14·9 ,,
B. & N. W. R.	...	7·9 ,,
S. I. R.	.	18·0 ,,

We have seen that State collieries produce 12·2 per cent of the Railway requirements and 16·3 per cent of the total production in India.

It is not the legitimate function of Railway Department to run collieries at a permanent loss. This imprudent action was taken on account of the combine of the owners of coal mines in 1920. Railways no doubt are the biggest consumers of coal, but other industries consume major portion of the coal produced in India. The system of artificially raising the price by combine to the detriment of other industries should have been checked by the State and it was unfair for the Railways to have attempted to checkmate the system of combines by starting their own collieries, and they are now paying for their mistake. They ought to have helped other industries by putting pressure on the Government to regulate the prices to a reasonable figure.

Direct administration of mines by the State can never be a profitable concern. They should be all leased out for suitable periods under the condition that the Railways should have the first choice to purchase the coal at a price the maximum and minimum limits of which should be prescribed. The rest of the coal should be purchased through Indian Stores Department, which may utilise the services of the department of the Mining Engineer attached to the department of industries. The Mining Engineering Department attached to the Railway Board can conveniently be abolished.

The saving on overhead charges will pay the interest charges on the capital spent on collieries. The removal of all the supervisory staff and the disposal of all the collieries on suitable conditions will be financially economical. This question should be examined in greater details.

SECTION 3.

Strategic Lines.

Strategic or Military lines are those which were originally constructed for military purposes, irrespective of revenue consideration. They are now worked by the N. W. Railway as a part of its administration, but the budget of the strategic lines is kept separate. Under the Convention of 1924, the loss on strategic lines, including the loss on working and the interest on the capital at charge, is borne by General revenues. It is deducted from the contribution by the Railways to General revenues under the Convention of 1924. The amount of contribution is calculated on the income of commercial lines alone. The balance after deducting the loss on strategic lines is the net amount payable from Railway to General revenues in each year (*Vide* Chapter IV, Sec. 5). Strategic lines are divided into three groups :—

		Length.
(1) Baluchistan Railways :—		
(*a*) Main line from Ruk to Chaman	..	310·10 miles.
(*b*) Branch lines	...	574·33 ,,
(2) N. W. F. P. Railways :—		
(*a*) Main line from Peshawar to Lundikhana	..	36·67 ,,
(*b*) Branch lines	..	40·60 ,,
(3) Branch lines in the Punjab :—		
(*a*) Sind-Sagar line	...	157·00 ,,
(*b*) Shershah-Campbellpore	..	309·20 ,,
(*c*) Other lines	...	126·47 ,,

The expenses of Military lines have always been greater than the gross income except during the War from 1914 to 1918, and in these years the working ratio was less than 100. The following figures will show the high expenditure and absence of traffic on strategic lines :—

Year.	Operating ratio of N. W. Ry. commercial lines.	Operating ratio of strategic lines attached to N. W. Railway.
1932-33 ..	76·41	149·00
1933-34 .	74·05	146·61
1934-35 ..	71·69	149·79
1935-36 .	65·87	153·56
1936-37 ...	60·93	145·62

The Kangra Valley Branch is the only example of a commercial line which is less remunerative than military lines Here the working ratio in 1936-37 was 316·90. The percentage of net earning to capital outlay is a negative number and it is—2·15.

The loss on strategic lines borne by general revenues is given in Chapter IV, Sec. 5, and it amounts to Rs. 28·94 crores since the separation of Railway Finance. The present position of the so-called Military lines is not well-defined. Defence Department has no hand in the administration of Railways, nor has it any financial responsibility for their working. The administration is carried on by the N. W. Railway, and the deficit is written off against the contribution by Railways to general revenues. If the Defence Department insists on keeping those lines for Military purposes, then it is only fair that the deficit should be written off against the Military budget.

SECTION 4.

Ports.

The ports in India are administered by statutory Port Trust Boards. Each port is governed under the Act of Indian Legislature. The Boards of Calcutta, Karachi, Madras, Bombay and Chittagong ports are statutory, but the Cochin Port is managed by an administrative officer and an Harbour Engineer-in-chief. The Cochin Government and Travancore Governments are consulted in certain appointments. The ports in Kathiawar are administered directly by the Indian States to which they belong.

The Port Trust Board has an executive chairman who is a whole-time officer, and gets an honorarium of Rs. 3,000 to 4,000 p. m.

The Chairman of the Chittagong Port is the Agent and General Manager of the A. B. Railway and he gets no extra allowance for the work. The other members of the Board get Rs. 3 for attending each meeting provided that no member is to get more than Rs. 200 in a single calendar month. The number of members of the Board is 21 of which 14 are elected by various Chambers of Commerce and the remaining 7 are nominated by the Government. The Bombay and Karachi Acts prescribe that members will be entitled to the allowance only if they attend meetings from beginning to end This rule will have a very salutary effect if enforced in the Railway Committees.

The administration of ports, as in some other countries, is not under the Railway administration. They have their own Acts and Regulations and are under the general control of the Department of Communications.

Cochin Harbour.

In 1500, the Portuguese Admiral Cabral brought his fleet into the harbour; Vasco de Gama arrived in 1502, and died there. The first European building in India was erected near Cochin in 1504. The Dutch took Cochin from the Portuguese in January 1663 and remained there till 1795 when they were succeeded by the British.

The first chart for developing Cochin Harbour was made in 1835, and for the next eighty-five years reports succeeded each other, some helpful, some not, until at last in 1921 the Madras Government with Lord Willingdon at its head clinched the matter by starting work on a small scale.

Madras Harbour.

The first Madras Harbour was Fort St. George founded by Francis Day in 1639 on a sand bank at the mouth of the Cooum River to provide a safe place for the ships and trade of the Honourable East India Company. The trade of Madras has constantly outgrown the premises of the Port; in 150 years the Fort became much too small to hold it, and expansion was necessary. In 1794 the Governor, Lord Clive, moved the Sea Customs office away from the Sea Gate to its present site. In 1868 the Chamber of Commerce urged on Government the construction of some sort of harbour to protect ships from weather and from the extortion of boatmen. A Committee was appointed to report, which was strongly in favour of building something, but was much divided on the question whether it should be a closed harbour, or a long breakwater parallel with the coast.

Karachi Harbour.

From the commencement of the present century, the limitations of Keamari, which then served as the only Export Yard, had become apparent and the question of increasing the stacking accommodation for exports had been engaging the attention of the Port Trustees. Various schemes had been formulated by the Port Engineer of the Board in this connection and for other improvements of the Port.

The years 1902 to 1905 saw a further large development in the export trade of the Port, and a still further increase was anticipated on the completion of the sanctioned programme of the extensive irrigation schemes in the Punjab and Sind, costing several crores of rupees. The facilities of the Port were, however, utterly unable to cope with this development and the urgent necessity for a new Export Yard was then keenly felt.

These changed conditions of the trade called for re-consideration by the Board of the whole question of accommodation for exports in 1911, as it became apparent that the area proposed to be made available in the new Export Yard would be insufficient for the accommodation of the large exporting firms and would altogether preclude the possibility of accommodating the local merchants, who were then also accommodated at Keamari. They, therefore, decided :—

(1) to retain Keamari as a combined Export and Shipping Yard,

(2) to utilize the new Export Yard as a produce yard where specified stacking areas could be reserved for local merchants on monthly tenancy,

(3) to serve the areas in the latter yard by rail tracks for conveyance of produce to Keamari either to exporter's plinths or ships' side as may be required.

There was a big conflagration in the yard on 2nd April 1928 when a large quantity of cotton was destroyed. The total damage was estimated at Rs. 56 lakhs. This led to the consideration of the question of fire arrangements for the protection of the cotton in the yard, and, as a result, a big fire protection scheme was started which has just been completed.

Bombay Harbour.

Bombay was handed over to the British in 1661 as part of the royal dower of the Infanta Catherine of Braganza sister of King Alfanso VI of Portugal and bride of King Charless II of England.

Essentially Bombay is the natural outlet for India's trade with the West; it is strategically situated in the middle of the west of the country, thus enabling it to draw upon a vast hinterland extending beyond the uplands of the Deccan to the fertile Indo-Gangetic plains. In recent years the harbour has been improved to facilitate the handling of deep draught shipping. The minimum depth in the fairway is 32 ft. at low water spring tides, and this is also the maximum draught for vessels passing through Suez Canal. There are two dry docks, the Hughes and Merewether; and three wet docks, Alexandra, Victoria and Prince's.

Vizagapatem Harbour.

The justification for choosing Vizagapatem for development as a major port may first be briefly explained. For some years the need for a really good port on the east coast of India between Madras and Calcutta, a distance of approximately 900 miles, had been felt. Vizagapatem which lies half-way between Calcutta and Madras, therefore, attracted attention, and it was realised that by developing it into a really good port and providing it with adequate railway facilities, not only would the trade of the Central Provinces be stimulated by the provision of a shorter route to and from the sea but a large hinterland then lying more or less untapped would be opened up, and manganese ore from Central India would be able to compete favourably in foreign markets.

The Government of Madras supported the view of the Government of India that a first class port with a suitable harbour and docking facilities should be developed and that in conjunction with this development the Raipur-Parvatipur Section of the Bengal-Nagpur Railway should be built in order to afford the port easy access to large areas which it was intended to serve.

In 1925, the first stage of Vizagapatem Harbour Scheme costing Rs. 223 lakhs and estimated to take five years to complete was sanctioned by the Secretary of State for India. This included Rs. 30 lakhs for interest during construction at 5½ per cent. In 1930, a revised estimate was prepared based on the then accepted proposal. This estimate amounted to Rs. 311 lakhs including Rs. 72 lakhs as interest charges. In 1932 estimates were further revised and they were raised to Rs. 507 lakhs inclusive of 181 lakhs as interest charges. In the original estimate, submitted to the Secretary of State, it was anticipated that the port, when opened to ocean-going traffic, would earn about Rs. 19·19 lakhs which, after deducting sinking fund charges, would give a net return of about Rs. 15·29 lakhs or nearly 5 per cent of the total capital cost.

The actual expenditure exceeded the estimate from 2·23 to 5·87 crores. The actual income was much less than the original estimate. The port is now being worked at a financial loss :

Years.	Receipts in lakhs.	Expenditure in lakhs.	Losses in lakhs.
1934-35	8·23	12·94	4·71
1935-36	11·25	13·80	2·55
1936-37	10·82	14·83	4·01
1937-38	15·31	15·00	·31

It is contended that the amount debited under depreciation fund is not sufficient and the real deficit will be much greater. The Public Accounts Committee suggested that the administration of the port of Vizagapatem may be handed over to the B. N. Railway. The administration is a great financial burden to tax-payers and it was suggested that the port may either be closed or handed over to the B. N. Railway. But the possibilities of such action have not been fully explored. The port is administered by the Government through the General Manager, B. N. Railway, who is represented at Vizagapatem by a Deputy Administrative Officer.

I believe that the expenditure on Vizagapatem port on such a large scale was a great mistake and it is one of the many projects on which Government wasted money by giving erroneous rosy picture to the legislature. Direct administration by the Government of India will involve the Indian exchequer in continuous losses. The closing of the harbour will be a dead loss of the capital. It may be handed over to B. N. Railway or any other authority who may be willing to offer favourable conditions.

The following table indicates the financial position of the 7 major ports of India :—

No.	Names of Ports.	Import & Exports in tons.	Revenue Income in lakhs.	Expenditure in lakhs.	Capital invested in crores.
1	Calcutta ..	9,197,041	317·00	312·00	30·39
2	Madras	908,794	36·00	47·00	4·73
3	Chittagong ..	443,850	7·21	3·45	·38
4	Karachi	2,256,326	78·00	70·00	4·05
5	Bombay .	5,096,000	233·10	223·07	24·29
6	Cochin ...	780,498	12·52	10·48	...
7	Vizagapatem .	724,178	15·84	15·58	5·74

SECTION 5.

Purchase of Stores.

A Stores Department has been organised on each Railway under a Controller of Stores and it fulfils the following functions :—

(*a*) It acts as a stockist for the normal requirements of the Railway and has to distribute from stock stores in general demand as and when required on line.

(*b*) It sells the surplus and condemned material of the Railway.

(*c*) It watches consumption and decides in consultation with consumers as to what material should be purchased for stock purposes.

(*d*) It arranges for the supply of material which cannot be purchased more economically through other purchasing agencies established by the Government.

The work is carried on in several sections such as (1) Purchase, (2) Custody, and (3) Distribution. All stores purchased is kept in suspense account and it is debited to the final capital or revenue account, as the case may be, when it is supplied for consumption. The Controller of Stores decides whether a particular article should be manufactured in Railway Workshops or purchased. He also collects the requirements of all consuming departments of Railways.

In 1929, the Government of India laid down the policy that stores for public services should be purchased in such a way as to encourage the development of the industries of the country to the utmost possible extent consistent with economy and efficiency. In order to give effect to the above policy preference will be given in the following order :—

First, to articles which are produced in India in the form of raw materials, or are manufactured in India from raw materials produced in India, provided that the quality is sufficiently good for the purpose ;

Secondly, to articles wholly or partially manufactured in India from imported materials provided that the quality is sufficiently good for the purpose ;

Thirdly, to articles of foreign manufacture held in stock in India provided that they are of suitable type and requisite quality, and,

Fourthly, to articles manufactured abroad which need to be specially imported.

The Railway Board gave the fullest effect to the policy and laid down detailed rules which are published in the proceedings of the Standing Finance Committee for Railways (*vide* Vol. XII, No. 6, pp. 196-197). It is insisted that the articles imported from foreign countries should be purchased in India in Rupees. This rule handicaps open competition. Railways can purchase only from those firms who are enterprising enough to have agents in this country.

There exists a danger in this system as pointed out by the Retrenchment Committee in paragraph 190 of its report .—

" In pushing too far the system of bulk purchase through the Indian Stores Department, or otherwise, two dangers are to be guarded against. One is the possibility—and undesirability—of increasing stores balances. The other is the risk of the system of bulk and centralised purchase resulting in giving an advantage to the foreign manufacturer who has the benefits of mass production and can usually quote better terms than the indigenous manufacturer who usually manufactures on a small scale, and in preventing new firms from getting a footing in the market, thus leading to the formation of a combine."

In the year 1937-38 (Administration Report Vol. I, p. 78), the total value of the stores purchased by Railways was Rs. 15 crores, of which 1·25 were spent in stores imported direct, 4·67 on imported goods purchased in India and the remaining 9·08 in stores of Indian manufacture of indigenous origin. The value of the stores under the control of the Railway Board is 4·41 crores.

The store balances or the value of stores in suspense account kept in the custody of the Chief Superintendents of Stores was Rs. 23 crores in 1921-22. These balances are continually diminishing and now their value is Rs. 9·24 crores. It is outside the scope of this book to comment on the organisation of the Indian Stores Department. The quantity of purchase has increased so much that machinery originally devised for smaller business is proving inadequate.

The utility of the policy of insisting that foreign products should be purchased in India in Rupees is very doubtful. We have to pay commission to agents of foreign manufacturers and are bound to buy only from firms who have their agents in this country.

SECTION 6.

Railway Workshops.

Every Railway Administration maintains its own Workshop where repairs of every description to locomotives, carriages, and wagons can be carried out. These workshops also manufacture spare and duplicate parts required for workshop and running repairs. New construction of coaching and goods stock is done to a limited extent.

Locomotives for metre gauge are manufactured at Ajmer in the workshop of B. B. & C. I. Railway. Till recently the Ajmer Workshop manufactured engines for the requirement of its own line, but now they have undertaken to manufacture metre gauge engines for other Railways as well.

The Legislature and the Public Accounts Committee have repeatedly demanded that arrangements should be made to manufacture locomotives in India; and the Railway Board has now set up a special Committee to investigate its possibilities. All workshops are capable of constructing wooden carriage bodies, but underframes and bogies are built at E. I. R works at Tata Nagar, with the exception of wheels, axles and buffers which are imported from outside. Goods wagons are not constructed in Railway workshops but are purchased from Indian wagon builders, *viz.*, Burn & Co., Jessop & Co., I. S. W. & Co. and Braithwaite & Co.

All locomotives, carriages and wagons in service are carefully examined by the Transportation (Power) Officers and small repairs are carried out in smaller workshops, but the entire stock is overhauled periodically in bigger workshops. The locomotives are overhauled after a service of approximately 90,000 miles in case of passenger engines and 70,000 miles in case of goods engines.

The carriages are brought to bigger workshops for overhaul after one year or 18 months service according to the type of carriage, but Broad Gauge goods wagons do not require overhauling for three years. Careful records of the history of each loco, carriage, and wagon are kept and the repairs and overhauls are done at scheduled times.

Separate accounts are prepared for each workshop and the cost of each repair is properly debited. The stores for workshops are either purchased by the Stores Department described in the preceding section or manufactured in workshops. The following is the list of the Railway Workshops in India :—

A. B. R. Loco & Carriage Workshops at Paharitali.

B. N. R. ,, ,, ,, ,, Kharagpur.

B. B. & C. I. R. Broad Gauge Loco Workshops at Dohad.

„ Carraige & Wagon „ Workshops at Bombay.

Metre Gauge Loco, Carriage and Wagon Workshops at Ajmer.

B. & N.W.R. Loco & Carriage Workshop at Gorakhpur.

E. B. R. Broad Gauge Loco & Carriage Workshop at Kanchraparra.

Metre „ „ „ Sidpur.

E. I. R. Loco Workshops at Jamalpur and Lucknow.

Carriage & Wagon Workshops at Lilloah and Lucknow.

Underframe Workshops at Tatanagar.

G. I. P. R. Loco Workshops at Parel.

Carriage & Wagon Workhops at Matunga.

Loco & Carriage Workshops at Jhansi.

M. & S. M. R. Broad Gauge Loco, Carriage & Wagons Workshops at Perambur.

Metre Gauge Loco, Carriage & Wagons Workshops at Hubli.

N. W. R. Loco, Carriage & Wagon Workshops at Moghulpura.

Wagon Workshops at Sukkur.

S. I. R. Loco & Carriage Workshops at Golden Rock.

H. E. H. The Nizam's State Railway Loco & Carriage Workshops at Secunderabad.

The cost of repairs per wagon is different in different railways and it is highest on B. N. Railway, being Rs. 144, and lowest on S. I. Railway, being Rs. 69 only. The cost of repairs of track per mile was highest on the East Indian Railway being Rs. 2,645 and lowest on the South Indian Railway, being Rs. 908 in 1930-31. The average cost of repairs per locomotive was highest on M. & S. M. R., being Rs. 10,000 and minimum on E. I. Railway, being Rs. 5,744.

SECTION 7.

Electrification.

The following sections of Railways are electrified :—

G. I. P. Main Line Bombay to Igatpuri *via* Kalyan, 85 miles ;

Kalyan to Poona, 85 miles Suburban line Bombay to Kalyan 34 miles.

B. B. & C. I. Railway Church Gate Street to Virar, 38 miles.

I. S. R. Madras to Tambaram, 16 miles.

Madras-Suburban Electrification.

The original estimate of gross outlay was 47·36 lakhs, but the total amount reached the figure of 73·89 lakhs. The traffic in 1936-37 was 6·11 lakhs train miles, and percentage of savings on gross outlay was 1·13 per cent. This percentage increased to 3·71 in the year 1937-38 on account of sudden rise in traffic by 48 per cent.

Bombay-Suburban B. B. & C. I. Railway.

The original estimate was 204·28 lakhs, but 202·90 lakhs were spent. The traffic in 1937-38 was 14·76 lakhs train miles and the percentage of net saving on gross outlay was 5·90.

In the case of G. I. P. the estimate was for Rs. 950·90 lakhs, but the actual amount spent was 959·71 lakhs. The valume of traffic is 42·33 lakhs train miles and the percentage of saving 3·16. The Railway Board in their memorandum* expressed the hope that after a study of the Report of the Main Line Electrification of the L.N.E.R. and of the German States Railway, it will be in a better position to judge the results of the electrifications in India, though at present and for so long as conditions remain abnormal detailed comparisons of actual financial results of the two forms of traction (electric and steam) are bound to be not quite fair to the former. In this connection the following opinion of Sir Josiah Stamp will be read with great interest.

Sir Josiah Stamp, President of the London, Midland and Scottish railway system, speaking recently of the electrification of railways, is reported to have said that a few years ago when companies were experimenting with suburban lines in a practical way, it seemed that ultimately it would lead to the electrification of the main lines. Today the position is different. During his last visit to the United

*Report of Public Accounts Committee Part, II, p. 65.

States he found that American engineers were turning away from the possibilities of main line electrification towards the greater possibilities of steam. In a number of directions the efficiency of steam locomotives had now been greatly increased. For example, maintenance costs were being reduced and quicker acceleration was being developed. Sir Josiah said :—

"It seems that the old steam locomotive is not so down and out as some people imagine. Over the whole range of our system we have leaped into fine speeds not merely on a few crack trains but on the whole stock of new trains. On the one hand they were getting steam maintenance costs diminished, on the other, electrification maintenance costs were regarded as largely guesswork and entirely problematical.'

The views expressed by Sir Josiah Stamp clearly indicate the trend of events and the manner in which the prospects of extensive development of main line electrification are receding. Under the existing conditions, the scheme of electrification of main lines should be given up.

SECTION 8.

Accidents.

Safety is the most important factor in travelling and it is the function of State to ensure that Railway travelling does not involve risk of life. The inspection of railways is undertaken in virtue of the provisions of Section 4 of the Indian Railways Act of 1890, which authorises the Governor General in Council to "appoint persons by name or by virtue of their office, to be Inspectors of Railways." The duties of such Inspectors as laid down in the Act are :—

(*a*) to inspect railways with a view to determine whether they are fit to be opened for the public carriage of passengers, and to report thereon to the Governor General in Council as required by this Act ;

(*b*) to make such periodical or other inspections of any railway or of any rolling-stock used thereon as the Governor-General in Council may direct ;

(*c*) to make enquiry under this Act into the cause of any accident on a railway, and

(*d*) to perform such other duties as are imposed on him by this Act, or any other enactment for the time being in force relating to railways

The average cost of inspection borne by the Railway Department was four lakhs a year. The Railway Retrenchment Committee of 1931 recommended the reduction in the number of Inspectors from 8 to 5, and curtailment in the expenditure by 1½ lakhs. In case of major accidents and in all cases involving loss of life, one of the Inspectors makes enquiry at the scene of accident, takes evidence and submits his report

The Inspectors write half-yearly reports in which they describe all the cases of accidents The summary of these reports is published in the administration report. In recent years there have been several accidents, specially on the E I. Railway, and the travelling public has become nervous. To restore the confidence of the public it is desirable that in case of each accident involving loss of life, a judicial enquiry should be instituted. One or more Railway engineers may also be associated by the Government and not by the Railway Board. The accident which attracted considerable attention of the public and of the Government in recent years is the Bhita accident which occurred on the 17th July 1937 The engine left the rails and fell down the embankment. There was considerable discussion whether the accident was due to the hunting of the engine caused by excessive speed, or defect in the track or sabotage.

The Hon. Sir John Thom was invited by the Government of India to enquire into the causes of the accident. The technical sides were not examined by Sir John Thom, which the Government of India referred to another Committee under the presidentship of Col. Mount. The Committee recommended as described in Chapter I, Section 15, that safe velocity should be determined by the consideration of the strength of the track and of the engine. The other accident which attracted considerable attention is the accident near Hazaribagh Road on 12th January 1939. The most important feature of this disaster was the occurrence of fire. The fire broke out 15 minutes after the accident took place. The cause of the fire, in the opinion of Senior Government Inspector, will never be determined definitely.

As regards the accident, he was definite that it was due to the removal of a rail from the track. The matter was referred to a tribunal presided over by Justice Brown Field. The tribunal in paragraph 68 said :—

"We have found that the derailments at Muthroopore, Bhadaura and Hazaribagh were brought about by malicious tampering with

the railway line, with the deliberate intention of wrecking trains. We hope that we have established this fact beyond the possibility of further dispute."

It is highly desirable that the Railway Inspectors should not be under the Railway Board. They should be independent persons and they should not be eligible for any appointment on Indian Railways. These Inspectors must necessarily be Railway Engineers and their pay should be sufficient to attract suitable persons. The XB Engine which is responsible for Bhita accident, ought to have been tried by Railway Inspectors before using them in ordinary service trains.

The Government Inspectors in their enquiry report make certain recommendations and it is not mentioned how far their recommendations are carried out.

The total number of accidents in a year is approximately 19,000 with slight variation in different years. These accidents are due to a variety of causes given below :—

Class of accidents during the year 1937-38

I.—Accidents to trains :—		
Collisions :—		
Passenger trains	...	48
Other trains and Light engines	...	215
Derailments :—		
Passenger trains	...	258
Other trains	...	3,361
II.—Failure of engines and rolling stock, failure of engines due to faulty design, material or workmanship in the Mechanical Department :—	...	
(1) Boilers and tubes	...	85
(2) Machinery springs, etc.	...	344
Failure of engines due to faulty material, workmanship or operation arising from the working of the running staff :—		
(1) Boilers and tubes	...	237
(2) Other causes	...	1,434

Failure of tyres and wheels	..	13
Failure of axles	...	45
Failure of brake apparatus	...	22
Failure of couplings and draft gear	...	1,966
Other rolling stock failures	..	271
III.—Failure of permanent-way :—		
Broken rails	..	316
Failure of tunnels, bridges, viaducts, culverts, etc.		8
Flooding of portions of permanent-way		90
Slips in cuttings or embankments	.	45
IV.—Fires :—		
Fires in trains	...	188
Fires at stations involving injury to bridges or viaducts	...	36
V.—Other accidents :—		
Trains running over cattle on the line	...	9,191
Trains running over obstructions on the line (than those at level crossing)	...	157
Trains running over obstructions or vehicles at level crossings	...	116
Train wrecking	...	16
Attempted train-wrecking	...	73
Miscellaneous	...	372
Total.		18,910

The number of persons killed in train accidents during the year 1937-38 was 3,370 and the number of persons injured 14,111.

SECTION 9.

Passengers Traffic, including Amenities to Third Class Passengers.

In most of the Indian Railways, there are four classes, First, Second, Intermediate and Third. It is demanded by some persons that the classes should be reduced to two,—upper and lower. Experiments are being tried in this direction in some branch lines. In India upper class coaches serve the purpose of sleeping cars. Air conditioned coaches have recently been introduced along certain routes but they are still in the experimental stage.

Trains in India have no corridors, although its gauge of 5 ft. 6 inches permits their provision as discussed in Section (1). Comforts of passengers and facilities for checking tickets are much affected by the absence of the corridors. Third Class travelling is much more popular than travelling in higher classes. The following table gives the number of passengers, the earnings and the average route miles which passengers travelled during the year 1937-38.

Class.	Number of passengers in thousands.	Earnings in laks.	Percentage to total passenger earnings.	average rate paid, in pies.	average mile travelled.
First Class.	4,66	78	2·7	18	180·4
Second Class.	4,385	1,39	4·8	8·31	72·2
Inter Class.	11,483	1,21	4·1	4·13	48·9
Third Class.	488,161	25,91	88·4	2·94	34·8
Total. ...	504,400	29,32	100	3·14	35·5

It appears from the above table that the bulk of passengers income is derived from Third Class passengers and it is 84·4 per cent, while the contribution of First Class passengers is 2·7, Second and Inter classes pay 4·8 and 4·1 respectively. The number of Third Class passengers is 96·7 per cent. From the percentage of earnings from passengers of various classes, it is evident that the profit is mostly obtained from Third Class passengers, the Second Class

passengers just pay the expenses of travelling. The Railways get less from Inter class passengers in spite of greater accommodation ; and administration definitely loses on 1st class passengers. From the economic point of view, the railways would gain, if they maintain only Third and Second classes and discontinue Intermediate and First class traffic. The First class passengers may reserve entire *coupe* by paying two Second class fares.

It also appears from the table that distance average of high class passengers is greater than those of lower classes. The average of Second class is more than double that of Third class, or in other words, the high class passengers use the Railways for longer traffic Higher class passengers travel in their own district or neighbouring districts in their private cars. They have freedom in choosing their own time and they have additional advantage that the car is available for service on the other side of the route.

If it may not be possible to reduce the number of classes from 4 to 2, upper class bogies on the branch lines may economically be removed without much inconvenience It will lower the route mile average of upper class passengers.

Air conditioned coaches.—Air-conditioned coaches are now running between Calcutta and Bombay and between Bombay and Delhi on the Frontier Mail. The Railway Administration Report says (p. 80) that the results attained by the end of the year under review indicate that the outlay incurred on these air-conditioned coaches will be amply justified.

Amenities to Third Class Passengers.—Third class passengers are the best customers of Railways. They contribute 88·4 per cent of passengers' income, but they are the least attended to as they are not sufficiently vocal. In crowded season, goods wagons are used in some lines to carry Third Class passengers In recent years, the members of the Central Legislature have been impressing on the Railway administration the necessity to look after the comforts of Third Class passengers. The complaints have partially been removed.

The grievances of the Third Class passengers attracted the attention of Acwth Committee which divided the complaints under the following heads :—

(*a*) Over crowding to the extent at times of double or even more than double the approved carrying capacity.

(*b*) Inaccessibility and insanitary condition of W. C.'s in Third Class carriages for long distance journeys.

(*c*) Dirty condition of Third Class carriages.

(*d*) Inadequate water supply on station platforms

(*e*) Inadequate food supply arrangements.

(*f*) Inadequate waiting sheds or waiting rooms.

(*g*) Insufficient booking office facilities.

(*h*) Uncivil treatment by railway staff.

The Honourable Sir Mohammad Zafrullah Khan, the then Railway Member, in reply to a cut motion on the amenities of Third Class passengers, said :—

"Perhaps Honourable Members will be interested in the kind of daily messages that are printed and supplied to all railway stations over the Great Indian Peninsula Railway. 'Courtesy costs nothing' : 'It promotes good feelings' : 'Courtesy conciliates passengers' : 'It prevents unpleasantness'. 'The illiterate Third Class passengers need your aid and guidance.' 'Most of your pay comes from Third Class passengers : 'They are entitled to your help and assistance'. Every endeavour has been made during rush periods to provide additional Third Class carriages on more popular trains and duplicate trains have been run when necessary. Special facilities and concessions are allowed for small excursion parties travelling in a reserved carriage for distances of over 100 miles. Through booking is made of all classes of passengers on rail-*cum* road return tickets from 17 stations on the N.W.R. *Mela* passengers are carried from certain points in the cities of Amritsar and Lahore to the Railway stations by road at an inclusive charge covering road and rail transport to *Mela* centres. Separate compartments for non-smokers have been provided on certain trains as an experiment on the N. W. Railway. Lavatories of a number of lower class carriages have been enlarged and generally improved including the provision of a small shelf, and electric lights : also commodes have been replaced with floor pans in latrines of Inter Class carriages".

In the Railway Administration Report, a special chapter is now devoted to the improvements made by various Railways for the comforts of Third Class passengers.

It should frankly be acknowledged that Railways are now bettering the condition of travelling for Third Class passengers but much is still left to be accomplished, for instance :

(1). Laterines are badly designed and they are not kept clean. Their number is insufficient. Passengers cannot keep their clothes

clean in Third Class and even in Inter Class lavatories. It is desirable that their hygienic condition may be improved and their number increased.

2. Sleeping accommodation may be provided for long distance passengers, whenever possible. Some lines have constructed special third class coaches with treble berths.

3 Fans may be installed in Third Class carriages. The N. S. Railway now fits in electric fans in every Third Class carriage which comes to workshop for repairs. Railways should reserve a small portion of capital expenditure for this purpose.

4. Booking offices are often opened only a few minutes before the arrival of the train, and passengers find it difficult to purchase tickets conveniently. Sometimes they cannot get a ticket without paying gratuity. It is very desirable that booking offices should be opened about half an hour before the arrival of the trains and at junction stations all the 24 hours

5. Trains are sometimes over-crowded. Till recently passengers were shoved in the goods wagon and carried like luggage. The rules for putting on extra carriage, or starting additional train either as part of the over-crowded train or independently, are so stringent that in practice they are rarely carried out. It seems desirable that Station Masters, without much formality, should be able to provide extra carriages if justified by traffic.

6. The carriages are not properly cleaned at terminus, insects and ants make their regular abode in Railway carriages. Even the upper class carriages are haunted by ants so much so that passengers cannot conveniently keep eatables in the compartments.

7. *Indifference of Railway servants.*—Railways at one time had monopoly in traffic and the question of incivility or indifference of Railway officers was not a matter of great importance. Now the monopoly is lost and incivility shown to the passengers helps to divert traffic from rail to road. In other countries the railway servants help the perturbed passengers and they are ready to render every possible service. They consider that they exist for the convenience of passengers, while in India Railway officials believe that passengers exist for their convenience. The Railway administrations are now taking action and breaking the old standing traditions which have almost become chronic.

8. The system of supplying coolies (porters) at Railway stations is very defective. Coolies very often add to the worries

of passengers by putting nerve breaking pressure on passengers. Their incivility is connived at by the Railway officials. The supply of labour is a very lucrative business and it is done at the expense of passengers.

9. Some lines, of which the East Indian Railway is a notable example, have introduced a novel form of taxation of the nature of Poll tax. A certain gentleman whom the Administration desires to favour is given Ekka and Tonga contract on a number of stations. The favoured gentleman gives the sub-contract to a local person and he comes at the end of each month to collect his poll tax. The local sub-contractors charge each Ekka and Tonga a certain amount for each round which adds to the travelling bill of passengers. The contractor has no responsibility and no duty except to collect his monthly Poll tax. In some cases he is also given a free pass. There is no justification for this tax and it should be abolished at an early date.

10. The system of the supply of food at the station and in the train has repeatedly been criticised in the press, in the Legislative Assembly and in the meeting of the Advisory Committees. It is discussed in the next Section.

It seems desirable that a standard third class carriage may be devised which should provide sleeping accommodation, fans, wider and more hygienic lavatories. The carriages, when they come to workshops for repairs, should be overhauled according to the new model. Tonga tax which is a meaningless tax, should be abolished. Supply of coolies should be left to Station Masters and they should be prohibited from realising tolls from coolies. The higher officials should listen to these complaints directly and not depend entirely on their Inspectors.

SECTION 10.

Catering Arrangements.

Amenities for Third Class passengers and their catering arrangements have attracted the attention of the Legislature more than any other railway problem has. But in spite of repeated demands from the public and the legislature, no substantial improvement has been made by Railway administrations.

The author raised the question in the Central Advisory Council for Railways on 18th November 1931. The Railway Board in the memorandum laid before the Council pointed out that it was not

the practice on railways to auction contracts for vending eatables at stations, and the vendor was ordinarily debarred, according to the terms of his agreement with the railway, from subletting his contract. The general practice was to charge a small monthly fee. The rates for articles sold required to be approved by the Railway administration; and were fixed according to the prevailing market rates. It was one of the duties of the Station Masters to inspect the wares of the Station vendors daily. Periodical inspections were also made by other railway officials, including those of the Medical Department.

The author moved the following resolution in the Legislative Assembly on the 26th July 1934 (Vol. VI, p. 687) :—

" That this Assembly recommends to the Governor General in Council to appoint a Committee consisting of Railway officials and others not connected with Railway Administrations to enquire as to how far the present system of giving contracts and sub-contracts, to outsiders and not to local persons, for catering to the Railway passengers is responsible for the supply of bad food and drinks at very high prices by the vendors at the railway platforms, in the refreshment rooms and in the running trains and to suggest ways and means to remove these grievances."

He gave facts and figures showing that the prices at railway stations were higher than the prices of the same articles in the same town. He deprecated the system of sub-contracts and quoted the case of Delhi Station. He also pointed out that the policy on each Railway changed with the change in the personnel of the staff. On the G. I. P. Railway, for instance, one Commercial Manager deprecated the auctioning of the contract, but his successor introduced the system again. In the same speech he made the following suggestions :—

(*i*) The system of sub-contracts should be abolished.

(*ii*) The contracts should not be auctioned. The Railways increase the cost of travelling by this indirect tax.

(*iii*) The prices at the Railway Station should be the same as prices of similar articles in the town.

(*iv*) The practice of giving contract for the whole line to one person should be stopped.

He concluded by saying that in this matter opposition Members were greater authorities than those occupying treasury benches who travel in saloons and often make their own catering arrangements.

The motion was strongly supported by Sir Henry Gidney and Sir Abdul Halim Ghuznavi who quoted from a letter to the Chief Operation Superintendent, p. 697.

" Some time back, Sir Hugh Hannay, (Agent, E. I. Railway) at a meeting of the Advisory Committee, made the statement that after full consideration, the Railway authorities have definitely decided not to give large area contracts to one contractor, and that it would be limited to twenty or thirty miles and that no tender will be called, but the contract given to respectable and reliable vendors at reasonable rates and that there would be separate Hindu and Muhammadan vendors. This was satisfactory, and if carried out, would be of very great convenience to the travelling public, but I find that in practice the policy followed is quite contrary to the spirit of the decision arrived at by the authorities. It appears that there are certain firms and individuals who are particularly favoured. It is for the railway authorities to lay down a policy as well as to see that it is carried out in practice."

Sir Joseph Bhore, the then Railway member, gave an assurance that the Railway Board would secure the provision of good and wholesome food at reasonable rates for the travelling public.

The subject was discussed again by the Central Advisory Council on 3rd October 1936 when an exhaustive memorandum was laid by the Railway Board describing the practice on various railways. The deliberations of the Council were :—

(*i*) The rent of refreshment rooms should be nominal, but rent may be charged for premises occupied as residences or for storage.

(*ii*) Stall holders should be charged a reasonable licensing fee. No fee should be charged in case of hawkers.

(*iii*) The stall holders and shopkeepers should pay for electric current.

(*iv*) They should also pay municipal taxes, if charged by the Municipality.

These recommendations were partially reversed by the Central Advisory Council for Railways at its meeting held on 16th September 1939. It laid down the following propositions :—

(1) The amount of charges to be recovered from refreshment rooms and vendors should be determined by the railway administrations acting in consultation with their local advisory committees. Minority recorded that administrations should not be influenced by any desire to make a profit out of the arrangement.

(2) The Council unanimously agreed that the award of contracts to local men or giving contracts by areas or sections, might

best be left to various railway administrations to decide, subject to their consulting the local advisory committees

(3) An economic rent should be charged in all cases except when, in the opinion of the Railway administrations after consultation with the local advisory committees, low rent, or even no rent, should be charged in order to avoid the necessity of withholding existing facilities.

These resolutions led the N. W. R. to formulate proposals for charging economic rent from Indian Refreshment Rooms, and led the E. I. R. to give large area contract to a single individual.

The question of catering has been frequently discussed by the Central Legislature, Central and Local Railway Advisory Councils and the opinions of their members have repeatedly been recorded, but the position has not altered. The Railway Board has taken no action beyond preparing memoranda and individual railways never attempted to frame any policy. Their policy changes with the change of officers and the person who has power to give or terminate contracts, makes his own rules to favour or dis-favour certain individuals.

On the East Indian Railway, Sir Hannay said that Railway authorities have definitely decided not to give large area contracts to one contractor. His successor turned out individual contractors and gave the contract of the entire line to one man. On the G. I. P. Railway one Chief Commercial Manager announced that tea stalls should not be auctioned and his successor did just the opposite.

Time has now come when the Railway Board after such consultation as it may deem necessary should definitely lay down certain principles for all railway administrations to follow and end the waste of its own time and the time of the legislature and of the Advisory Councils.

The author moved the following resolution in the Legislative Assembly on 8th February 1940.

"This Assembly recommends to the Governor General in Council to fix without delay definite principles for the sale of food on Railway stations and in running trains and end the discussions on the subject in Railway Advisory Committees and terminate the continuous experiments by Railway officials."

I make the following suggestions :--

1. *European Refreshment rooms and Restaurant Cars.*—On account of limited sale, the contracts of all the refreshment rooms and Restaurant Cars in one line, may be given to one contractor. Refreshment rooms on Stations which are not junction stations may be

closed. The Railway should not charge any rent for refreshment rooms, but it should charge rent for residential quarters and for electric current. Quality of food is often poor and greater supervision should be exercised.

2. *Hindu and Muslim Refreshment Rooms and Refreshment Cars.*—The system of giving contract on the whole line to one person should cease. The contractor generally leaves the management to his clerk who works on a small salary, and who earns his wages by giving stale food in smaller quantity to passengers. The Railway also loses by giving a number of passes to the contractors who use them for their own private and commercial purposes. There was a scandal on the G. I. P. Railway a few years ago. The contract should be given to a local caterer as far as possible, who should himself be present and be able to exercise personal supervision.

No rent should be chared for the rooms. Small licensing fee not exceeding Rs. 5 per mensem may be charged according to the importance of the station. The rates at which articles are sold at present are very high and they can be lowered by about 40 per cent.

3. *The Stalls and Hawkers.*—These contracts should not be auctioned to the highest bidder. The Railways should charge licensing fee not exceeding Rs. 2 per mensem.

4. The contract of ærated waters and restaurant cars for Indian food may be given for each section.

5. *Period of Contracts.*—All contracts should be for 3 years and should be terminable for breach of rules. These contracts should not be transferable. The person who takes the contract should himself supervise the work.

6. Contracts should be given by Station Masters who will be expected to consult district authorities in important and contentious matters. The contract of Indian Refreshment cars and ærated waters should be given by Divisional Superintendents, not by operating or Commercial Superintendents. The contract of European Restaurant Cars should be given by the General Manager.

7. *Prices.*—It should be the duty of the Station Master to see that the prices at the Railway Station of various articles are the same, if not lower, as those in the town. He should also arrange stalls for selling the specialties of the town.

The present prices are too high and they should be lowered. Ice should be sold at one anna per seer ; sweet ærated waters one

anna and soda nine pies per bottle ; small cup of tea, six pies ; big cup, nine pies ; tea served in tray one anna six pies ; Chhota Hazri with two toasts and butter in Indian Restaurants, three annas ; and in Refreshment Cars four annas.

Reliable contractors can be found to who will sell articles at the above prices, if only the railway administrations are prepared to give a trial.

SECTION 11.

Publicity Department.

The Central Publicity Bureau was inaugurated on March 1st, 1927, by the Railway Board with the object of stimulating and developing indigenous and foreign traffic on Indian Railways by widespread publicity in various forms.

A Central Publicity Officer was appointed to conduct and control these activities and he was provided with an assisstant and a small clerical establishment, (comprising an office superintendent, an accountant, stenographers, record clerks and despatch clerks.) He also took over from the administration of the G. I. P. Railway the existing cinema and photographic staff.

Prior to this the only activities of this nature were carried out by the G. I. P. Railway, who produced some posters and pamphlets and worked in close co-operation with the Canadian Pacific Railway Company (as organisers of world cruises) and some of the travel agents.

The scheme also provided for the co-ordination of functions of the State Railways through the local publicity officers on each system. Officers were appointed to the publicity posts on the N. W. Railway, the E. B. Railway, the E. I. Railway and the G. I. P. Railway.

The duties of the Publicity Bureau, as laid down at the time of its establishment, were as follows :—

(*a*) To carry out all overseas publicity work for Indian State Railways with the object of developing Tourists Traffic and to assist the Indian Trade Commissioners with publicity material ;

(*b*) to develop publicity to stimulate and encourage travel in India, particularly by Third Class ;

(*c*) to produce cinema films, edit, develope and circulate them for all Railways in India and abroad ;

(*d*) to act in an advisory capacity for the local publicity work of all Indian State Railways ;

(*e*) to advise and guide State Railways in the work of raising revenue from trade advertisements ;

(*f*) to co-ordinate the work of the Information Bureaus to be formed at all large centres on Indian State Railways ;

(*g*) to co-ordinate the work of the G. I. P. cinema car on State Railways ;

(*h*) to write up articles for the Press on Railway matters ;

(*i*) to produce all India Time Tables ;

(*j*) to produce All-India Tourist Guide and principal Tourist centres alphabetical reference guide ;

(*k*) to undertake poster production for all Railways ;

(*l*) to carry out a poster and press campaign to secure public co-operation and good will ;

(*m*) to co-operate with and to carry out certain publicity work for such other Government Departments (for example the Government Agricultural Department) as ask for it —such Departments to pay for work done for them ;

(*n*) to establish and control eventually a Publicity and Information Bureau in London.

It will be seen that considerable importance was given to the matter of film production. This work was divided into three groups, namely,

(*i*) Travel Films,

(*ii*) Educational films, including Safety First,

(*iii*) Rural Uplift, including Agricultural subjects.

The expenditure of the Central Publicity Bureau and other Indian Railway Bureaus came to 14½ lakhs in 1929-30 which is very modest compared with the expenditure incurred by other countries in the same year ; French Government £240,000, German Government £800,000 ; South Africa £36[illegible]0. Public Accounts Committee Report 1929-30, (p. 151.)

The budget of the Publicity Department is sanctioned by the Railway Board and its maintenance cost is not borne by direct grant from the State, but it is realised from the four State Railways in certain proportion. The Central Publicity Officer holds periodical meetings of the Publicity Officers of State Railways four times in a year. Publicity Bureaus were also opened in London and New York. They were not intended to compete with other tourists agencies, but the primary object of these bureaus was to keep India in the forefront and to ensure distribution of information and literature to the Travel Agents.

The Railway Retrenchment Committee in 1931 examined the activities of the Central Publicity Bureau. The expenditure at that time was Rs. 9,70,000 and after deducting receipts it came to R. 7,30,000. In addition to the expenditure in India, the expenditure on London Bureau was Rs. 1,20,000 and on New York Bureau Rs. 2,34,000. The Retrenchment Committee recommended :—

(*i*) that the Central Publicity Bureau be abolished, and replaced by a small establishment of two officers and a small staff under the Railway Board ;

(*ii*) that the staff in the London Office be reduced to one officer and three clerks (saving 2½ lakhs) and

(*iii*) that the expenditure on Publicity on railways should be reduced by five lakhs.

The Retrenchment Committee accepted the proposal of the Railway Board that the Central Publicity Bureau as such be abolished and to subsitute for it a small and less expensive publicity branch under the control of the Traffic Member of the Railway Board. This Branch will co-ordinate publicity questions on the different railways and in the overseas offices. It is proposed to reduce the number of superior officers in the office to two, *viz.*, a Chief Publicity Officer on a lower rate of pay, namely on Rs. 1,850, and an Assistant Publicity Officer on Rs. 350—30—800. The staff in the London Office will be similarly reduced by one. The total cost, including leave salaries, of officers is expected to be Rs. 78,000 this year as against Rs. 1,69,000 in 1932-33.

The functions of the Publicity Bureau were curtailed. The principal reduction was that of the Cinema Department. The publication of the Indian State Railways Magazine was entrusted to the Bureau. The Publicity Bureau controls the work of Publicity officer in London. The Bureau continues to issue posters, pamphlets and photographs. In the year 1935-36, it issued 22,969 posters, 2,19,247 pamphlets and 8,006 photographs.

The Wedgewood Committee, while commending the work of the Central Publicity Bureau, remarked :—

"The Bureau maintains two offices outside India, one in London and the other in New York. The latter is wholly engaged in the development of tourist travel from America to India. We think it is improbable that its activities will secure a profit to the railways commensurate with its cost. Such tourist travel is almost entirely first class, and first class travel in existing conditions gives at best a very narrow margin of profit. Moreover, the volume of American travel can never be considerable."

"We have given the matter careful consideration and we recommend that the New York office of the Central Publicity Bureau should be closed as soon as arrangements can be made to do so. The money thus saved could be diverted to the development of third class travel in India."

They did not recommend similar action in regard to the London office. The Government of India accepted the proposal and they said :—

" Orders have been issued for the closure of the New York Bureau during the summer of the year. Expenditure on upper class and particularly tourist traffic publicity and literature is being substantially reduced and special attention is being directed to ways and means of developing third class traffic by publicity. Advertising in the vernacular press will be increased."

The Committee entirely overlooked the advantages to the country by visits of tourists. It is not estimated in terms of Railway income. It is useful to small industries and it helps to establish the credit of Indian currency in the world market.

The budget for the year 1937-38 including expenditure in foreign countries was Rs. 5,56,715 against the receipt of the Rs. 57,272 the net expenditure was Rs. 4,99,443.

My own opinions are :—

(1) The Publicity should be one of the functions of the Railway Board and should not be separated from it.

(2) Closer contact should be established between Railway Publicity Department and the Bureau of Public Information of the Government of India.

(3) It can be made self-supporting to an appreciable extent by widening its activities in commercial advertisements on Railway premises and in limited case in carriages.

(4) It is not necessary to maintain a separate bureau in London. The work can be done by an officer attached to India House.

(5) The activities of New York Bureau should be further developed and if possible some publicity work may be undertaken in Paris.

(6) It should continue to press more intensively the desirability of providing cheap tickets and encourage inter-Railway travelling in India.

(7) The work of the Central Publicity Department is not and cannot be restricted to State Railways alone, and it is not fair to ask the State Railways to contribute for its maintenance The net expenditure should be included in the budget of the Railway Board

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SECTION 12.

Travelling without Ticket.

The absence of corridors in Railway carriages in India makes the checking of tickets impossible in running trains Tickets can only be checked at stations. Most of the stations have wire fencing and it is difficult to force passengers to enter and leave by official gates In most countries in Europe carriages and stations are so constructed that it is impossible for passengers to enter, travel and leave without tickets on main lines. Similar facilities for checking tickets do not exist in India.

Various efforts have been made in recent years to tackle the question. Among others it may be recalled that in 1922 the Bengal-Nagpur Railway represented the seriousness of the position to the Indian Railway Conference Association and pressed for a revision of the Railway Act in order to make the infringement of Section 113 a cognisable offence. The Indian Railway Conference Association took up the matter at its annual conference in October 1922, and passed a resolution to the effect, "That in view of the increase in number of passengers travelling without ticket and of the loss to railways and to Government caused thereby, this Conference recommends for the consideration of the Railway Board the advisability of revising the Railway Act in order to provide better security for railways in recovering fares and penalties for travelling without ticket." The question was discussed by the Railway Board with the Central Advisory Council

for Railways in July 1923. The Council recorded "the Council is not prepared to advise the adoption of this method until all other possibilities have been tried, and it considers that further experience should be gained of the improved systems of checking tickets now under trial on the North Western, the Oudh and Rohilkhand and other railways. It is considered that, if at all possible, the evil complained of should be met by improved checking and collection of tickets."

The subject has since continued to engage the constant attention of the Indian Railway Conference Association. In 1925 and 1926 the Conference re-affirmed its resolution of 1922 and sent copies of it to the Railway Board.

The Government of India twice introduced bills in the Legislative Assembly making ticketless travelling a cognisable offence, but the legislature did not agree to the new departure, which is contrary to the practice in other countries. The Assembly each time advised the Government to tighten up their system of checking tickets, which I now describe.

The usual system of checking tickets prevelent in most railways still followed in some railways, was that tickets were checked at junction stations, by ticket collectors who went to each compartment and examined the tickets of all the passengers. These ticket collectors occasionally travelled in the train and examined the tickets at stoppages. The supercheck was carried on by travelling ticket examiners, who worked under Accounts and they were given remuneration sufficient to place them above temptation. Their work was not confined to examining tickets, but they exercised supervision over the work of ticket collectors, Booking clerks and the Railway servants who travel without tickets. A person in the Traffic Staff cannot be expected to supervise and report against the work of his own colleagues, as a counter report from them, may lead to his suspension or even discharge. Mr. Scott first initiated new experiments and in the year 1923, he introduced a new scheme, which was called the 'crew system' 'of ticket checking.' In this scheme a ticket collector was posted in each carriage of a train and no passenger was allowed to entrain without a ticket or leave his compartment without giving up his ticket. The scheme failed in 1925 and a further attempt was made to get the crew system re-started but nothing was done as the number of men required were not forthcoming.

In 1926 Mr. W. H. Scott, who was at the time on special duty in connection with the formation of the railway clearing

accounts office, suggested giving the crew system a thorough trial on a busy section of the East Indian Railway. Mr. Scott claimed that the system, if properly worked, provided finality in that under it no ticketless passengers would be found in a train. Mr. Scott forgot that a railway carriage in India has several exits, and one crew cannot control the entire carriage. The crew system was introduced on 1st August 1926 and further extended in 1928 to the whole of Howrah Division and part of Asansol, Dinapur and Moradabad Divisions.

The Railway Board appointed a committee consisting of Mr. Moody and Mr. Ward in 1930 to examine and report whether the crew system should be retained on the East Indian Railway, and if retained under whom should they work? The committee recommended :—

(1) In the opinion of the committee the crew system in vogue should not be retained on the East Indian Railway.

(2) The crew system cannot be worked in accordance with Mr. Scott's recommendations.

(3) The committee does not consider that the crew system is workable in its present form.

(4). The collection of tickets should revert to stations.

(5) That the crew should be replaced by travelling ticket examiners and ticket collectors working under the Divisional Superintendents and the Chief Operating Superintendents.

(6) That as money becomes available fencing at stations be steadily improved in accordance with a priority programme.

The Railway Board accepted the recommendations of Moody-Ward Committee and they issued instructions to introduce the new system. But officers responsible to give effect to these instructions devised a novel method of introducing the change. They assumed that all persons engaged in the ticket checking work are discharged and they are re-employed in the new system in the lowest grade. The Inspectors and Ticket Examiners in higher grades, working under the old system, found themselves in embarrassed position, their salaries were cut down and they were deprived of all future prospects. This gave rise to a series of questions in the Assembly. The Railway Board subsequently removed the complaints by issuing fresh orders. These orders, though interpreted correctly by the N. W. R. Administration, are avoided by the E. I. Railway Administration by putting different interpretations ; and the subordinate staff there

are still complaining that they their future prospects are barred. It is unfair not to give them mileage on the scale given to the running staff, although the Government of India in the Rules and "Subsequent Instructions" issued under the Railway Amendment Act 1938, placed them in the running staff (Chap. VIII, Sec. 6).

It is high time that fresh experiments should stop and we should revert to the old system of checking tickets at stations under the supervision of Transportation Officers and super-check by persons of high standing directly under the Chief Accounts Officers. The travelling ticket examiners should not be treated as stationary staff for purposes of travelling allowance. The number in each grade should be fixed and promotion should be given from grade to grade when vacancies arise. The grade and the number should be so fixed that at least 15 per cent should have the opportunity to get promotions to the intermediary grade, and they should not be barred from any service in the Traffic Department such as Ticket Inspectors, Guards and Station Masters in the highest grade.

SECTION 13.

System of Appeals.

There exists at present great dis-satisfaction among the subordinate staff and specially in the State-managed Railways, about the manner in which their grievances are dealt with. The Government of India treats the higher Railway officials as Government servants and gives them all the advantages intended for Government officials, but in the treatment of subordinate staff, they follow a different method on the plea that Railways are commercial concerns. Sir George Rainey, Member for Railways while discussing the cut motion, said :—

"It would be unfair to single out this department alone for special treatment and that, if a reduction was finally found to be necessary, it should be general and applicable to all departments of Government." His predecessor insisted that the concessions intended for Government servants should apply to Railway officials as well. But for subordinate staff the Railway Board has laid down that :—

"The Railway Department being a commercial department, service in it must in its nature differ from service in other Government departments, and continuance of employment must be subject to the tests and conditions enforced by large commercial concerns."

In a commercial concern the administration is carried on by personal touch and not by rules and regulations and this is absent in the administration of Railways, specially State railways. The Railways should give greater security to their employees, and in this connection. I would refer to the debate in the Legislative Assembly on the 24th February 1934 on a cut motion about the system of appeals moved by the author. It was then pointed out :—

"The discharge order is practically given by the head of the department in the Divisional Superintendent's office on the report of a particular clerk. He sends his appeal to the Agent. The Agent has no special officer to deal with these cases, but a certain clerk in his office sends the appeal back to the Divisional Superintendent for disposal. The Divisional Superintendent, on the other hand, sends it again to the head of the department who reported the discharge and then it is sent back again to the clerk, and the clerk sends the application back with only a small memo, that this is the appeal of Mr. A who was discharged on such and such date. But frequently no details are brought to the notice of the officers and the poor man, without his appeal being read by any responsible officer, gets the application back with a note that the Agent regrets that he sees no reason to interfere in this matter. Now, he has got one more option left to him which is really given to all the servants of His Majesty, that is, an appeal to the Viceroy for mercy. Now, the application is sent to His Excellency the Viceroy. The Private Secretary to His Excellency naturally sends it to the Railway Board and that is the only thing that the Private Secretary could do. It is assumed that the Railway Board has some officer who will read these applications sent by His Excellency the Viceroy. But there we find that there is a second grade clerk or third grade clerk who simply puts on a printed memo without any officer reading that appeal, and sends it back to the Agent. The Agent, again, sends it back to the Divisional Superintendent and he, again, sends it back ultimately to the same clerk on whose report the man was discharged and on whose report the first appeal was dismissed, and now, on the report of the same clerk, again, the final appeal for mercy to His Excellency the Viceroy is also disposed of."

Sardar Sant Singh remarked :—

"Sir, the right of appeal is a most valuable right given to an aggrieved person. In a big organization like that of the railways this right of appeal is still more valuable, because it gives a sense

of security to the employees, and ultimately it leads to contentment in the service. The way in which the right of appeal is exercised by the employees shows the great importance they attach to this right, but the way in which these appeals are treated by the railway officials shows what little value they attach to this right." He gave several illustrations in proof of his statement. Sir Henry Gidney in the same debate remarked :—

"The Railway Board issues orders, the Railway Agents pass them on to Heads of Departments, the Heads of Department pass them on to the Divisional Heads and Deputies, and they in turn pass them on to the lower officers and subordinates, and often times you find the Loco Foremen the judge and the accuser of a driver or a fireman who had been punished by him, and in all cases he is supported by his higher officers, till you finally come down to, what my Honourable friend Dr. Zia-ud-Din has immortalised here, the ubiquitous clerk in the railway office. This is a daily occurrence. The opportunity of a subordinate to appeal, then, becomes an absolute farce, a sinecure. A man is discharged for some reason or other, rightly or wrongly. Say he is discharged by a senior scale officer. That senior scale officer, before discharging him, has consulted the Divisional Superintendent or the Deputy Mechanical Engineer or some such officer who has appointed the subordinate. Where does the appeal of that subordinate lie? Not to the senior scale officer who discharged him but to the one who has appointed him in office, *i.e.*, the Divisional Officer, but he is the one who has already agreed to his discharge on the recommendation of his under officer."

It is desirable that the Railway administration should create a sense of security among the subordinate staff and existing system should be modified.

All orders for discharge, as recommended by Labour Commission (Chap. VIII, Sec. 4), should be passed by Divisional Superintendents and not by one of his superintendents. The powers of Superintendents should be restricted to smaller punishments. The Divisional Superintendent will feel his responsibility in passing orders. The appeal should lie to the General Manager who should have a special officer of the rank of a Deputy to listen to these appeals. The officer should be a person of judicial mind and an independent person who may not be looking forward to any promotion in Railway service. He should be free to criticise the orders of the Divisional Superintendents and other Railway officials. The appellate officer may be drawn from the rank of a judge, or he may be a railway officer on the verge of retirement, but who has judi-

cial mind. He should have power to call for papers and in special cases to order a further enquiry.

In most cases, appeals will end at the General Manager's office, but in certain categories of cases and in cases of officers above a certain rank, an appeal to the Railway Board is permissible It is, therefore, desirable that an appellate officer with a judicial mind may be attached to the office of the Railway Board as well. He should have the rank of a Director and should be directly under the Chief Commissioner. This officer will pass orders on all memorials of mercy submitted to the Governor General The other alternative is to follow the practice of Australia and South Africa described in Chap. II.)

SECTION 14.

Recruitment.

Railway services are divided into the following grades : --

(1) Officers (Administrative officers, Junior scale and Senior scale grade) ;

(2) Upper subordinate or Intermediary grade ;

(3) Lower subordinate grade ;

(4) Menials.

Officers are recruited by the following methods :—

(1) By Competition ;

(2) By direct appointment of persons of non-Asiatic domicile by the High Commissioner for India by selection in the United Kingdom in accordance with the rules made by him ;

(3) By promotion or transfer from another Service ;

(4) By direct appointment of persons of Indian Domicile.

The proportion fixed for each of the above categories is as follows :—

(*i*) Recruitment by competitive examination conducted by the Federal Public Service Commission, 60 per cent ;

(*ii*) Recruitment in England by the High Commissioner, 25 per cent.

(*iii*) By promotion 15 per cent.

The distribution of posts to different catagories is not equitable. The percentage of recruitment by promotion should be increased from 15 to 25 per cent or even more. The experience in other departments has shown that in certain matters a person who has the experience, and possesses extensive knowledge of working is more useful than person with higher academic qualifications and little or no experience.

The railway administrations have recently stopped direct recruitment in Intermediate grade in State Railways and they recruit all persons on salaries varying from Rs. 24 to Rs. 32. This scale is too low to attract persons of required intelligence, education and social status. This practice is deteriorating the efficiency of the department.

The back-bone of Railway administration is the Intermediate service. They translate into action the principles devised by officers. The Company-managed lines have not stopped the recruitment in Intermediary grade.

The subordinates for the clerical and other administrative services are selected by the Divisional Superintendents and other heads of Departments on the report of a Selection Committee The candidates for the posts of Assistant Station Masters must have passed High School Examination and must be familiar with signalling. They are given special training after selection in a Railway School. The salaries at which they are recruited vary from Rs. 28 to Rs. 32 per month. The manner of the recruitment of menials is described in Sec. (1) Ch. VIII.

CHAPTER VI

Rail-Road Competition.

SECTION 1

General.

Competition between Rail and road transport services has come to stay in this country as in every other country. Efforts should be made to co-ordinate these services and not to kill the one or the other. One should frankly recognise that the country has established both these services as they are needed for the development of its industry and agriculture. Both these forms of transport being indispensible, it is the business of the Legislature to see that the one does not usurp the functions of the other but operates in combination with it. For instance, heavy goods, such as coal, stones, etc., consigned to long distances can be carried economically by rail alone and road transport can be utilised for bringing the country's produce to railway stations.

India does not manufacture motor cars and the road traffic is handicapped on account of (1) abnormally heavy duty on petrol (10 annas per gallon), (2) excessive customs duty (37½ p.c.) on motor cars and motor accessories, (3) bad roads, which in most Provinces are not properly maintained, since the local bodies assumed charge of their repairs, (4) want of good motor workshops outside big towns, and (5) absence of any law for recovering damages done to the cars on account of bad roads.

It should be frankly acknowledged that no country has yet found a solution of the problem of rail-road competition. Experiments have been tried with partial success The problem is really to define the respective economic spheres of the two means of transport. The economic sphere varies from time to time on account of the relative efficiency of the two forms of transport.

Professor Copeland summed up the situation in the following paragraph :—

" It cannot be conceded that motor transport is to be forbidden merely because it takes traffic from the railways and, therefore, increasees the railway deficit to be met out of the Consolidated Revenue. In some cases the maintenance of railway facilities might involve the community in a greater economic loss than would the increased taxation required to meet that portion of a railway deficit due to motor competition on some lines. A mere prohibition of

motor transport cannot be regarded as an economically sound course. By such action the community in effect ignores the advantages to be derived from a new form of mechanical transport. Governments would not be serving the best interests of their communities if they sought to establish a complete railway monopoly for the purpose of reducing the burden of railway finance upon budgets. On the other hand, the claim of private transport interests that unrestricted competition should be allowed cannot be sustained. Where motor transport is not a common carrier and merely takes the cream of the traffic on favoured routes, it may return a handsome profit to the private owners. To suppose that the existence of such profit indicates a net economic gain to the community involves a fundamental error. In this case, the profits may be less than the net loss to the community through the reduction of railway revenue on routes where the railways are forced to carry the less profitable freight. For handling some goods motor transport may have advantages over railways. Yet, taking the whole of the traffic for any area where this traffic is considerable, it cannot be conceded that motors would offer facilities equal to those of the railways. While this condition of affairs prevails, the State is justified in protecting its railway assets, and any inconvenience caused through the railway handling the goods most suitable for motor traffic is counteracted by the facilities offered by the railways on the whole of the traffic. Of course, if the community can afford both forms of transport, it would not be necessary to restrict motor competition in such a degree. In any event, the more bulky traffic should be sufficient to meet the overhead expenses of the railways, but in Australia, evidence has not yet been furnished to show that such a condition of affairs is possible. It is, therefore, necessary to regulate competition between road and rail transport by rationing the services."

The road motors have certain advantages which may be set out as follows :—

(*a*) They eliminate terminal charges, being able to carry goods from the consigner's door direct to the consignee without transhipment. The railway cannot do this except in instances where the traffic is sufficiently heavy to justify a siding at the point of production.

(*b*) They can bring the country produce to local markets, and the demand for such transport will increase when money-lenders have ceased to act as middlemen.

(*c*) Being operated in small units they are able to run more frequent services on routes on which the traffic is light.

The motor, therefore, is more convenient to the producer in that there is less delay in forwarding goods.

(*d*) The motor carrier often acts as the agent of the producer, collecting payment for goods, taking empty containers back, and in some cases even buying supplies for his country customers. It is almost impossible for the railways to do this on account of the large amount of accounting it would involve.

(*e*) There is undivided responsibility, and, therefore, less risk to the customer. Endless disputes arise between railways and their customers over losses in transit and these are avoided where responsibility is easily traced.

(*f*) As the necessity for transhipment is avoided, goods need less careful packing when sent by road transport. This may, in the case of fragile goods be a substantial item. This also applies to livestock, which arrives in better condition by road.

The railways have a clear advantage if the distance or the volume of traffic is large. Motor traffic cannot handle heavy goods such as coal and stone, nor can it cope with passenger traffic on important occasions. Railways are indispensible for the progress of the country and the development of its trade and industry. The railways are handicapped in so far as they pay the entire cost of the track they use, and in principle it is admitted that the motors should also pay for the maintenance of roads, but the costs are difficult to allocate to various types of road vehicles. A fast travelling light vehicle may do more damage to a macadam road, particularly in dry weather, than a slow moving vehicle of much greater weight. On a bitumen road the damage done by fast light traffic is small while a steel-tyred tractor might on a warm day lift the surface with it as it goes. There are innumerable types of roads and innumerable types of vehicles. The allocation of cost can, therefore, only be based on rough approximations.

In India fast light cars damage *kankar* roads more than the heavy bullock carts do, while steel tyres and iron shods of bullocks damage the modern road more than the pneumatic tyres of fast moving cars do. Besides, the damage done to the new pneumatic tyres by the nails and shods dropped by bullocks and horses is considerable. The separation of roads for fast traffic from those for slow traffic, as tried by several countries, is the best solution of the difficulty. It will define responsibility for maintenance which otherwise cannot be allocated.

On account of the complexity and constant variation of the problem, the co-ordination of different forms of transport is difficult to achieve. Sir J. (now Lord) Stamp recently remarked that the problem to find a new position of equilibrium with all the variables involved was almost insoluble. The safest course to follow is that of co-operation between the two forms of transport rather than cut-throat competition, which in the end will ruin both. So long as competition continues, some regulations are required. These should be as flexible as possible, and may be best framed by a Transport Board with wide powers and equally wide sympathies. South Australia has the best record in regard to the type of Transport Board. The State appointed a Board of three men who had little experience in transport, and the remarkable fact is that this Board, despite its lack of technical knowledge, has been working extremely well, and has been accepted by all parties as impartial.

Traffic brought to the Railways by motor transport.—Although the motor transport service stands in competition with the railway transport, it must not be forgotten that road transport assists the railways in increasing the volume of traffic. In the first instance, it brings agricultural products and passengers from country places. The motor services moving across the country usually have their terminus at a railway station and they serve as feeders to the railways.

The motor service necessitates the transport of material by rails. The motor car has brought a not inconsiderable increase of traffic to the railways. Directly or indirectly, the motor industry has created a large amount of rail freight traffic. The development of the highway system has necessitated the transport of stone, gravel, cement and sand. The large quantities of petrol consumed annually have to be transported from the refineries to distributing points. The National Automobile Chamber of Commerce of America estimates that automotive freight of all kinds carried by the railways in 1931 aggregated 3,16 3,645 car-loads, or the equivalent of about one-eigth of all rail originating car-load traffic. No such figures have been worked out for India.

SECTION 2.

Measures taken by the Railways to meet motor transport competition in various countries.

As long as railways were assured of monopoly in transport, their regulations remained very stringent. They did not attend

to the convenience of their customers and paid very little attention to economy both in their capital and revenue expenditure. The position was completely altered by the appearance of a new means of transport. The measures which the railways have now adopted to meet competition may be divided under the following heads :—

(1) Speeding up of trains, including goods trains, which in many countries are included in general railway time tables.

(2) Introduction of short and light trains.

(3) Extension of office hours for the booking and delivery of goods.

(4) Door to door delivery.

(5) Facilities to passengers.

(6) Traffic facilities.

(7) Agreements between railways and existing motor transport enterprises.

(8) General reduction of Tariffs.

(9) Reduction of short distance rates.

(10) Introduction of containers for small consignments of goods.

(11) Facilities for passenger traffic by introducing week-end tickets, return tickets, round trip tickets, collective tickets to school children and tickets for holiday excursions.

(12) Special tariffs for passengers travelling with motor cars.

(13) The third class passengers are treated in the same manner as upper class passengers. Some railways have recently provided sleeping accommodation for Third Class passengers in sleeping cars, and they are served with meals by refreshment room and restaurant cars in the same manner as passengers in the upper classes. The charges in railway refreshment rooms do not differ from charges in other restaurants of the locality.

United States.—In the United States of America, the White House forced a reduction in passenger rates from three to two cents in the face of opposition from practically all the railway officials. The transportation officials termed this action as "Confiscation" and started to appeal to the Supreme Court, but under pressure decided to give it a trial. Now, their trains are filled and some competing bus routes have been abandoned. More and faster trains are now in great demand created by this one-third cut in fares.

United Kingdom.—No general tariff reduction is introduced in Great Britain, but the number of day return tickets has been increased and the period of week-end is extended. Great improvement has been introduced in handling goods. The railways have undertaken to collect and pack goods and deliver them at destination. The use of containers has very much improved goods service. By the use of these containers the merchants have the advantage of complete wagon for small consignment.

France.—The French railways have very much improved passenger service by introducing steam heating and sleeping accomodation in the third class. Although fares have not been reduced, great facilities are offered for return journey, round trips, family parties and excursions. Special rates are also quoted between particular stations. These reductions vary from 40 to 60 per cent.

With a view to modernising their services, the railways have established special reduced rates between certain stations. Reduced rates have also been introduced for empty packing cases. In Grande Vitesse Traffic a special tariff has been put into force, providing in principle for door-to-door service and intended to reduce the time taken for delivery. In passenger traffic reductions have been introduced particularly in respect of collective tickets. Parcels traffic has been speeded up, and long distance combined transport and delivery services have been organised. The hours during which stations remain open have been increased. Numerous tests have also been conducted with rail-cars and road-rail wagons, and services of this kind are already in operation.

Belgium.—In Belgium, rolling stock has been improved and goods service has been speeded up. They have also introduced small containers. Door-to-door delivery is made by railways. Although regular return tickets are not introduced, week-end, and cheap excursion tickets are freely issued.

Switzerland.—In Switzerland, service has been speeded up by extensive electrifications and goods service is accelerated by automatic braking and reduction in stoppages. Railways work in very close collaboration with motor services and joint fares and time tables are in force.

Germany.—The characteristic step which the German Railways have taken is the adoption of short light goods train called Leig-Zuge. They have also introduced small capacity containers into service and railway wagons are consigned to traders' premises on road by means of special vehicles called 'fahrbares Susschlussgleis' (wheeled private sidings). They have also introduced rail car

service attaining a speed of 100 miles per hour. The principal measures adopted in Tariff are the reduction of the rates applicable to higher classes and the reform in the rating of small consignments by the introduction of a uniform system of rating irrespective of the nature of the merchandise.

The importance of accelerated service was particularly pressing in Italy on account of frequent transport of fruits and vegetables where motor competition with its door to door service was bound to make itself strongly felt. The Italian railways have given more importance to the transport of small consignments. The means adopted in this connection include introduction of short light goods trains, sorting operation in the trains, institution of consolidation depots and provision of wagons for minimum loads of 2 tons To improve passenger traffic, they have introduced a number of additional light trains, encouraged group travelling, and considerably improved passenger service by arranging halts at stations. The rates have been substantially lowered for short distances both in goods and passengers traffic by 20 to 70 per cent.

SECTION 3.

Rail road competition in various countries. (Nature of the problems and measures to solve them.)

(*a*) *Australia.*—In Australia, the mileage of roads is 280,000 against the rail mileage of 27,540. The main roads are maintained by the State and the other roads partly by municipalities and partly by the State under the supervision of Road Boards. The road funds are credited with a sum equal to 2¾ *d.* per gallon from the duty levied on petrol, revenue accruing from the licence and registration fees, taxes paid under the Motor Vehicles Acts and Vehicles Licensing Acts, and the sums obtained from Police fines, and fees for hawkers licences issued by the Treasury. There are no Government owned motor transport concerns in Australia except in Victoria.

There is no Commonwealth regulation governing motor transport. Several States in Australia have adopted legal measures to control commercial motor traffic which amount to protection of railways.

The Australian Railways generally belong to the State they serve ; but the management of the railway system is in the hands of a Board of Commissioners who are responsible to the State Parliament.

Motor services are also regulated by each State. In the year 1932, a Conference of Australian Railways and Transport authorities was held and it passed the following resolution :—

" That in the opinion of this Conference it is an imperative necessity in the national interests to establish complete legislative control and regulation in each State of all forms of commercial motor transport, by road or air, used for the conveyance of passengers or freight.

" Such control and regulation should be exercised by Transport Boards or Councils, equipped with full powers to ensure effective fulfilment of the decisions arrived at.

" To control Inter-State Traffic, Federal Legislation is also necessary, complementary to and in co-ordination with the State's legislation in order to ensure the complete safeguarding of the State's interests.

" It is further essential that the legislation should include the principle that commercial motor vehicles should not be permitted to operate in areas where it can be shown that the existing transport facilities are adequate."

The Conference complained of over capitalisation of railways. The railway capital is unnecessarily burdened with capital expenditure which a pure commercial concern will not stand. The Conference strongly urged that the Railway administration should be co-ordinated by establishing a common Clearing House for settlement of Inter-State accounts, common workshops operations, joint purchase of stores, and uniform railway gauge. The Conference recommended that railways should be free from political interference.

(*b*) *Canada.*—There are two principal Railway systems in Canada under the control of a Central Board.

1. The Canadian National Railways, which operate 21,981 miles, are owned and managed by the Dominion Government.

2. The Canadian Pacific Railway belongs to a private Company, which is to a certain extent under Government control. It operates 16,866 miles of line. The Canadian Railways are over-capitalised and they yield 1·7 per cent on the capital liabilities. On account of unhealthy competition between two rival political parties, large sums of money were sunk in unremunerative undertakings.

The road mileage in Canada is estimated at 394,372 miles, of which 40 per cent are unimproved roads.

In the year 1931 a Royal Commission was appointed to inquire into railways and other means of transport, and it remarked that a considerable portion of the traffic carried by motor coaches is new business, which they have developed for themselves and which would not go to the railways if motor coach services on the highways were discontinued. Some areas are served by motor coaches which the railways do not touch and the motor coach is also used by those who in default of its services would use the private motor car rather than the railway.

The Commission, after detailed enquiry, came to the conclusion that long-distance traffic has actually increased. This is borne out by the fact that the average distance a railway passenger was carried was 74·2 miles in 1929 as compared with 68·8 miles in 1923. In the same period counter traffic to and from the larger cities also showed some increase, so that the inference is drawn that those who are using the motor vehicle as a means of transport to the detriment of the steam railways are the medium distance passengers, travelling not more than 75 miles.

It will be of interest to note that motor business, in the long run, is not a profitable business. It was Mr. Loree's opinion that motor coach and bus operations in the United States were not profitable and the same was true of Canada, though there were always exceptional cases where by reasons of good management and favourable traffic conditions some profit was being made.

It was for this reason that the railway companies hesitated to engage themselves in motor traffic as this would add to the losses they are already incurring.

The taxation and the framing of rules to regulate motor traffic are provincial subjects in Canada.

The average tax paid by a motor car with seating capacity for 30 passengers travelling 30,000 miles a year is 840 dollars or Rs. 2,770.

(*c*) *Union of South Africa.*—The Government of the Union of South Africa has a virtual monopoly of the railways. The Union owned 13, 459 miles in 1934.

The actual management is carried on by the General Manager under the supervision of the Ministry of Transport. The construction and maintenance of goods are, as a general rule, the functions of the Provincial Governments. There are about 173,756 miles of road. The mileage of properly constructed Government

roads is 71,505 miles. During 1929 a sum of £2,176,817 was spent on their construction and maintenance, of which £1,000,000 was constructed by the Union Government.

The income derived from taxation of motor vehicles is credited to the road fund but it only represents a small portion of the total expenditure on roads and bridges in the Union. The taxation of motor vehicles, being a provincial question, is not uniform.

Motor transport has been placed under the control of the Road Transportation Board constructed in 1930. The functions and duties of the Board are as follows :—To investigate any matter relating to motor carrier transporation in the Union ; to determine from time to time the value and nature of motor carrier transportation which shall be permitted to operate over any proclaimed transportation route ; to receive and consider applications for motor carrier transportation, and for the amendment of any such certificates previously issued ; to consider the guarantees offered by undertakings ; to suspend or revoke any certificate, should it be considered necessary to do so, etc.

The Motor Carrier Transportation Act as was passed in 1930 by which a central transportation and 10 local Boards were created. Each board consisted of a chairman and two members.

The following passages from the report of the Central Board for the year 1933-34 will be read with great interest : —

" The action of the Board and local boards in curtailing the private road services, which had been operating between centres connected by rail or road services, was severely criticised. It was stigmatised as retrogressive, an interference with the liberty of the subject ; it was stated to be militating against trade development.

It must not, however, be assumed that those operators whose competitive services were discontinued were ruthlessly denied an existence. Wherever possible they were diverted into spheres where a much needed service could be rendered by co-ordinating their transport operations with the administration's rail or road motor service or with other previously existing private services."

" A development of great interest is the appointment of a Transport Advisory Council in accordance with recommendations contained in the Salter Report. The principal function of this Council is to study transport problems and to furnish advice to the Minister in regard to the measures that should be taken to promote the development, improvement and co-ordination of transport generally. The Council consisting of 29 members is fully representative of the various interests that are directly or indirectly concerned with the question of transport."

"The road transport in one year carried 55½ million passengers and ½ million tons of goods."

(*d*) *United States.*—The road mileage is three million and there is one mile of road to 5·4 square miles. The motor vehicles are used most extensively in the United States. There are 10 vehicles for every 47 persons. The world figure is 10 per 570 persons. The total railway mileage is 242,390.

The upkeep of roads costs 2 million dollars (1 dollar = Rs. 3·3) of which 30 per cent is covered by taxes on motors. This proportion is increasing. The Inter-State Commerce Commission, on its own initiative after extensive hearings on the subject, arrived in 1932 at the following conclusions. There is to-day an excess of carrying capacity in existing transport facilities. This excess is due to the freedom with which the motor car has been allowed to develop and create competition. This competition operates under conditions of inequality which are favourable to motor transport. It is reasonable that wherever motor transport renders better service it should replace the railways, this transformation should be encouraged wherever it seems to be conducive to progress. On the other hand, Federal Legislation relating to the regulation of motor vehicles operating on the public highways and engaged in inter-state commerce is desirable in the public interest.

The National Transportation Committee in its report dated February 1933 recommended the maintenance of the railway system without any addition to existing regulations and emphasised the necessity for the railways to adapt themselves so as to meet competition and reduce unproductive costs. Regarding motor transport, the Report recommended the introduction of regulations and taxation which should not, however, put it in a less favourable position than the railways.

There are no federal regulations in the United States in regard to motor transport tariffs, although a Bill has been introduced putting common carriers under the control of the Inter-State Commerce Commission as far as inter-state traffic is concerned. The States of the Union have, however, framed their own regulations for the control of motor transportation.

(*e*) *France.*—The French Railways are operated under a system combining private enterprise and State control. The organisation of both these groups is governed by the Convention of June 28, 1921. Under this law each railway retains the right to organise and operate its own system, subject, however, to the control of a joint Committee of Management and a joint provincial organisation. There is also a Superior Council of Railways independent of the Committee of Management.

The railways also contribute to the country's budget by the collection of certain taxes which according to the Act of 1933 amount to 12 per cent. France has about 650,000 kms. of roads consisting of national highways, 'departmental' roads, main district roads, Parish roads and ordinary roads. There are 80,000 kms. of national highways. The French system is the most highly developed in the world as regards length of roads relative to the area of the country. (France has 120 kms. of road per 100 square kms. of land; Great Britain 95 kms.; United States 62 kms.; Germany 45 kms.) In respect of length it takes the third place after the United States and Russia

The expenditure on the roads, including overhead charges and new construction, was 5 billion francs of which 3·2 was contributed by motor industry in the following manner :—

	Billion Francs
Petrol Tax	... 1·9
Registration fee	... 1·1
Driver's licence fee	... ·2

The Railways have gone carefully into the question of motor transport competition in goods traffic. Their studies appear to show that competition is more specially felt on live-stock traffic, and where there is packing material to be returned. Whenever motor transport operators are assured of a return load, they are willing to carry any class of goods whatsoever. It is estimated that this type of traffic amounts to 200 million tons per year.

It must also be remembered that a certain volume of traffic has been brought to the Railways by motor transport. In the year 1931, the railways carried 2,100,000 tons of petrol of which 86 per cent (1·8 million tons) were consumed by motor vehicles.

The conditions of road and rail transport are governed by the Decree of April 1934.

The objective is a suitable apportionment of traffic between the railways and motor transport, respectively, and the provisions of the decree tend towards the accomplishment of that purpose through regional agreements entered into by the representatives of the two transports, the public authorities only intervening as arbitrators in the case of differences. The scheme will be carried into effect under the direction of a Co-ordination Committee consisting of five members. The main work of this Committee is to secure agreements among the organization of public passenger and goods transport services by road and rail.

The Decree applies to public transport, only *i.e.*, to services offered to the public on a commercial basis, and not to private transport operation.

After a great struggle in Parliament, the working time for railway workers was fixed at a maximum of 8 hours a day and 1,384 hours in a year. The working period is the same for motor transport.

(*f*) *Germany.*—The railways in Germany were constructed by different States but the Constitution of the German Empire framed in 1871 recognised the right of the Empire to supervise the railways and regulate rates. It was provided in the constitution that the Empire should endeavour to verify and reduce the principal rates over long distances for the conveyance of coal, wood and metals. The details are given in Section 6, Chapter II.

The German railways, more than those of neighbouring countries, are centralized in their administrative organization and decentralized in their economic functions. This situation results in a happy combination of unity of management and flexibility of operation. It accounts for the railways putting up a stronger resistance against motor transport competition than in other countries.

A decree of 1919 introduced licences for all motor transport services operating beyond the limits of a municipality. The provisions of this decree were subsequently confirmed by a law of 1925. A further decree of 1928 defined "motor transport lines" operating with regularity as public services. This latter notion was not, however, sufficiently concise. Under a decree of October 1931 transport by lorry over distances of more than 50 kms. was made subject to the issue of a licence; this obligation was extended at the same time to passenger transport. The law of October 1931 was subsequently amended by complementary decrees as to its application. A compulsory minimum tariff was established bringing the motor transport tariffs into line with the tariffs of the three highest classes of the D. R. G., plus the additional charge of 5 per cent for closed wagons.

During 1933 the new Government adopted a policy which was more favourable to motor transport, and the following laws were introduced in that year; (*a*) the law of April 10th, 1933, abolishing the licence fee in the case of new motor-cycles and new touring cars; (*b*) the law of May 31st, 1933, giving the owners of motor-cycles and cars already in use the option of making a lump-sum payment in lieu of the annual licence fee and (*c*) the law of 27th June, 1933, regarding the formation of an enterprise called the 'Reichsautobahnen'. This enterprise was constituted as a subsidiary

of the Reichsbahnen ; it was a separate legal entity and is governed by public law. It was formed with a view to constructing and operating special roads reserved for motor traffic. Under this law the post of Inspector-General of German Road Affairs was created. The Inspector-General is vested with very wide powers in regard to all proposed road construction. The first constructional plan comprises a motor highway system of about 1,000 kms.

Germany has taken the lead in organising a statutory body to construct roads for fast traffic

The motor transport enjoys freedom for distances under 50 km. This distance of 50 km. has been fixed with a view to allowing a certain scope for the development of motor transport as well as to encouraging it to operate locally, and also because over certain distances motor transport enters much less into competition with the railways. For operations beyond 50 kms. a license must be obtained. The issue of the licence is dependent upon the guarantees offered by the operator in respect of safety of operation and the observance of the special legal provisions laid down in that connection.

(*g*) *Belgium.*—The number of motor vehicles is rapidly increasing since 1925. According to the figures for 1931, there was one vehicle for 48 persons. The growth of motor traffic has been accompanied by a steady increase in road expenditure. It rose from 25·6 million francs in 1925 to 93·6 in 1931. To meet this additional expenditure a Road Fund of 600 million francs was created in 1928 to be used over a period of five years.

The taxes paid by motor vehicles have increased steadily. These rose to 520 million francs from 116 million in 1925. According to calculations made by the *Societe Nationale des Chemins de Fer Belges* in 1930, light lorries deprived the railways of 75 million ton kms. representing a loss of 125 million francs.

According to similar calculations made by the *Societe Nationale des Chemins de Fer Vicinaux,* motor transport deprived the railways in 1930 of 5·5 per cent of its goods receipts, and 10·4 per cent of its passenger receipts ; in all 15·8 per cent of the total traffic.

Since 1929 road and rail problems have drawn the special attention of the Ministry of Transport. The principles governing motor transport organization are laid down in the law of March 1932. This law contains provisions dealing with the following points :—(*a*) definition of the term 'bus service'; (*b*) obligation of every service to obtain a proper authorisation ; (*c*) procedure to be followed in assuring such authorisation ; (*d*) creation of a Consultative Committee to express its opinion on all questions connected with road transport services.

In 1932 the Superior Council of Transport appointed a Committee to study relationship between the two means of transport. In August 1930 the Government raised the taxes. An annual surtax was to be applied to motor and steam vehicles for the transport of goods by road except those exclusively employed for transport operations for reward. The amount of this surtax was fixed at frs. 80 per h. p. for the first 10 h. p. and frs. 120 for each additional h. p in the case of vehicles taxed according to horse power. Where taxation was based on weight, the rates were frs 100, 150, and 200 established on a sliding scale. These taxes were, however, only applied to vehicles operating over distances of more than 20 km.

Strong protests against this sudden increase were, however, raised by the motor transport interests, and the law of December, 30th, ratifying the above mentioned decrees, introduced considerable modifications into the system of highway transport taxation and even repealed certain essential portions of it.

This law, in conjunction with the circular of January 31st, 1934, introduced a new system which came into force on October 1st, 1933. Its main provisions are as follows : -

(*a*) re-establishment of the transport tax at the uniform rate of 2½ per cent ;

(*b*) application of the annual surtax to all vehicles used for goods transport by road over any distance irrespective of whether such transport is effected for the owner's account or for reward. The rate of taxation has, however, been considerably reduced ; frs. 25 and frs. 38 instead of frs. 80 and 120 frs ;

(*c*) implicit abolition of the consignment note and the vehicle log-book ;

(*d*) doubling of taxation (registration fee with surtax where applicable) of vehicles using heavy oil fuel ;

(*e*) reinstitution of the tax exemption granted to operators of authorized bus services or those operated under concession, ambulances, etc., and to vehicles of the S. N. C. F. B. (Belgian National Railways) services, which had been withdrawn by the decrees mentioned above ; and

non-application of surtax to certain classes of tractors.

United Kingdom.—The capital invested in Railways is one billion sterling or 1,330 crores of rupees.

There are 177,000 miles of roads in Great Britain of which 43,000 miles are classified and the remaining 134,000 are unclassified. The annual expenditure for the upkeep and construction of roads is estimated at £ 60 million now; it was only £ 15·3 million before the introduction of motor vehicles. There is a divergence of opinion between rail and road interests as to the apportionment of this sum. The road interests claim that they should only pay the difference between the old and the new expenditure since persons other than motorists used the roads before the development of motor traffic. And since the revenue from the tax on fuel used by motors and from the taxation of motor vehicles totals £59,000,000, they hold that motor transport is paying more than its share of the cost of upkeep. The railway representatives point out, on the other hand, that motor transport ought also to contribute to the amortization of the initial cost of the roads as the railways do in regard to their permanent way. Both road and rail interests, however, agree that light vehicles are proportionally more heavily taxed than heavy vehicles.

The railway companies estimate that their total annual loss on rail service due to road competitions is 16 million sterling, 10 in respect of passenger traffic and 6 in respect of goods traffic.

In Great Britain the road and rail problem aroused public interest at a comparatively early stage and the public authorities have endeavoured to find a satisfactory solution. As early as April 24th 1928, in the House of Commons, Mr. Winston Churchill, Chancellor of the Exchequer, said: "It is the duty of the State to hold the balance even between road and rail." The Railways asked the Parliament to run road services themselves. It turned down their proposal, but the Railways purchased 50 per cent shares of road companies.

In 1930 the Road Traffic Act was published comprising over 120 sections with five schedules. This Act marked a real advance towards the establishment of order in a system which had previously lacked organisation. The Act and the Regulations made under the Act fixed the maximum weight and dimensions of vehicles the maximum weight of any vehicle being 22 tons. The maximum speed of vehicles was also defined. It varied from 30 miles per hour in the case of light lorries up to an unladen weight of 2½ tons, down to 3 miles per hour in case of very heavy vehicles, this minimum only being applicable in special cases. The working hours of drivers were regulated and this measure brought the conditions of employment in the road transport industry much more

into line with those prevailing in the railway industry. The Area Traffic Commissioners were made responsible for conducting periodical inspection of road motor vehicles with authority to carry out their inspection at any time along the route. Although primarily designed in the interests of public safety, this latter measure also had the effect of preventing undercutting of railway rates by the use of old or dilapidated vehicles. The Act also contained provisions regarding the physical fitness and age of driver. Lastly, it provided for compulsory insurance against third party risks. Stricter regulations were imposed on passenger transport. The Area Commissioners now have power to determine whether a service shall run or not, having regard to the requirements of the area under their control. They can likewise decide as to the elimination of unnecessary existing services or their co-ordination with other means of transport. They also have power to control tariffs with a view to protecting the other means of transport from ruinous competition. These Traffic Commissions were formed under Article 63 of the Road Traffic Act and consist of three members.

Despite all its advantages, the Act of 1930 still left a number of problems untouched. The Royal Commission which was formed in 1929 had recommended the establishment of a committee consisting of representatives of railway and motor transport interests to consider the whole problem. A committee was formed under the chairmanship of Sir Arthur Salter. The report of the committee is described in the following sections. A Road and Rail Traffic Bill was introduced in the House of Commons on April 7th, 1933, and enacted in November of the same year. This Act is in no way intended to hamper motor traffic. Its sole purpose is to regulate competition between road and rail so that such competition may take place under equal conditions for all.

The Act also created a Transport Advisory Council to advise the Minister on questions of transport collaboration. The Act of 1930 gave powers to Traffic Commissioners to co-ordinate passenger traffic and the Act of 1933 extended the powers to goods traffic. The Act of 1933 gave the privileges of quoting special rates not only between two stations but also to individuals.

SECTION 4.

Rail-Road Conference presided over by Sir Arthur Salter.

The findings of the Conference are very important in the discussion of the rail-road problem and they are frequently quoted by various countries.

It is universally admitted that motor transport should pay the proportionate cost of the maintenance of roads. The correct proportion of maintenance costs is not easy to determine. The Rail and Road Transport Conference appointed in the United Kingdom in 1932 under the presidentship of Sir Arthur Salter, attempted not only to fix the cost which mechanically driven transport should bear, but it allocated the share which each form of transport should contribute. The railway representatives asked no more than that this transport should pay its fair share of the cost of the roads they use as their permanent-way. They did not ask that, either by taxation beyond this point, or by restrictive regulation not required in the public interest, traffic should be forced back to the railways which they were not able to carry so conveniently or on very low basis of real cost. They did not ask that any class of service which might have been rendered obsolete or comparatively uneconomical by the new forms of transport now available should be artificially maintained. The road representatives, on the other hand, did not ask that commercial road transport should pay less than its fair share of the cost of the roads, or should by so doing attain any other development than that which is economic and in the public interest.

Had the motor roads been separated from slow traffic roads, the answer would have been simple. Motor traffic roads are also used for the purposes known as "Community use". They are used by pedestrians, cycles, bullock carts, ponies, troops, and conveyances for semi-public purposes. Substantial allowance should be given for the community use of the road.

The Conference remarked :—

"The only fair principle, in our view, is to consider the total annual cost of the roads and then to distribute it according to a just estimate of the use enjoyed, and wear and tear caused, by different categories of users. This is the just principle, but it is obviously very difficult to translate exactly into figures, there is no sufficient exactness in the data to enable the problem to be solved by a mere arithmetical calculation" (1)

The Conference came to the conclusion that the initial charges on the expenditure incurred in the construction of road should be borne by the community and the current repairs by motor transport. It recommended that the total contribution payable by all classes of mechanically propelled vehicles, whether in the form of licence duty or petrol duty, should be equal to the current expenditure on the roads, without net addition or reduction in respect of the above two items. The number of bullock carts and pony wagons is very small in England and this allocation would not apply to every country.

(1) Report of the Salter Committee, p. 15

The Conference, by elaborate calculations, fixed the amount of contributions by each class of motor transport for the repair of roads in the United Kingdom which stands at the figure of 60 million pounds or 78 crores of rupees per annum.

SECTION 5.

Early History of Road Development in India.

From the earliest times there is record of roads and wheeled vehicles in India (*vide* Report of the Indian Road Development Committee, 1927-28). Good roads and easy communications necessarily go with civilisation and civilised administration; and Indian civilisation goes back not less than five thousand years according to the latest discoveries of the Archaeological Department. The Rigveda mentions the existence of highways, *mahapatha*. The excavations by the Archaeological Department at Mohenjodaro in Sind and at Harappa in the Punjab have revealed that cities estimated to have existed between 3500 and 2500 B. C., had broad streets with a drainage system alongside them. At Harappa there was also found a miniature two-wheeled cart with gabled roof and a driver seated in front, fashioned in copper, which is probably one of the oldest representation of a wheeled vehicle in the world. The bullock carts now used in Sind have not much changed since the time of their use in Mohenjodaro.

Great progress was made during the Buddhist period and the Sukraniti also lays down rules for roads of various classes, prescribing the width and the method of construction. Punishments were also prescribed for improper use of roads.

In the Pathan and Moghul periods the main road system received considerable attention, and many of the *kos* minars or mile stones erected by the Moghul Emperors still exist. The exact length of a *kos* in modern measurements has not yet been accurately determined. The author has discussed the question in his article on the measurement of the earth published in "Islamic Culture". Ibn Batuta, who travelled in India during the first half of the 14th century, gives the following account of a journey performed by Sultan Kutb-ud-Din, son of Sultan Ala-ud-Din Khilji, who ascended the throne in 1317 A.D.:—

'After this he took a journey to Dawalat-Abad between which and Delhi is a distance of forty days. The road is from first to last enclosed with willow and other trees, so that a traveller seems to be in a garden throughout all this distance. Besides, there are at the distance of every three miles the stations of the foot couriers at which there are also inhabitants, as already mentioned From this place

to El Tellingans and El Malabar is a distance of six months In all these stations there is a lodging for the Emperor, with cells for his suits and for travellers generally There is no necessity, therefore, for a poor man's carrying-any provisions with him on this road (Travels of Ibn Batuta)."

The main roads in Moghul periods are described in the Chahar Gulstan. It gives the details and describes the stages of 24 roads, 13 of which have been fully identified.

Roads that have been mainly traced are the following :—

1. Agra-Delhi. 2. Delhi-Lahore. 3. Lahore-Gujrat-Attock. 4. Attock-Kabul. 5. Kabul-Ghazni-Kandhar. 6. Gujrat-Srinagar. 7. Lahore-Multan. 8. Delhi-Ajmer. 9. Delhi-Barcilly-Benares-Patna. 10. Delhi-Kol. 11. Agra-Allahabad. 12. Bijapur-Ujjain. 13. Sironj-Nairwar.

During the British rule and prior to the introduction of railways, a number of trunk roads, bridged and metalled, were constructed and maintained under the supervision of military engineers, connecting the more important military and commercial centres. The developments that were inaugurated during the Governor-Generalship of Lord William Bentinck (1828—35) were continued and extended by Lord Dalhousie (1848—56). He suppressed the Military Board and constituted the Department of Public Works. The expenditure was increased and the construction of Grand Trunk Road was taken up in his time.

After the advent of railways, attention was concentrated on the construction of feeder roads at right angles to trunk roads.

There are now 43,020 miles of Railways in India and the length of roads in British India is 245,443 miles maintained by public authority, of which 157,873 miles are classed as motorable and the remainder unmetalled earth roads not usually passable by motor traffic. Of the motorable roads, the classification is as follows :—

		Miles
Concrete	...	136
Bituminous	...	10,173
Waterbound macadam-Stone	...	47,062
Kanker, Laterite or brick metal	...	13,873
Other types	...	32,948
Earth roads motorable in fair weather	...	53,681

The figures for Indian States, as far as can be ascertained, are as follows :—

	Miles.
Total length of roads .	61,823
Motorable length . .	52,168

of which the classification is as follows :—

Concrete ..	32
Bituminous .	516
Waterbound macadam-Stone ...	19,071
Kankai Laterite or brick metal ...	2,103
Other types ...	10,261
Earth Roads motorable in fair weather ...	20,182

The Jayakar Committee, appointed by the Government of India in 1927 recommended planned development of roads for marketing agricultural produce and as a complement to Railway development. It recommended additional taxation on motor spirit and on vehicles and licence fees on vehicles plying for hire. The Committee recommended that the Railways may contribute towards the construction and maintenance of feeder roads, and the Indian Railways Act be amended accordingly. It also recommended that the Army budget should contribute towards the cost of the maintenance of roads.

The metalled roads were in the beginning constructed on the ancient roads and the railways were laid out along the same routes, and on account of this 48 per cent of the railways routes have metalled roads running parallel with them. The following table gives the mileage of rail and road in various provinces :—

Province.	Railway mileage.	Motorable road mileage.	Area covered by each mile of motorable road (in square miles)	Percentage of motor roads parallel to railways.	Expenditure on maintenance of roads (In lakhs).
Madras ...	4,377	27,115	4·52	11½	111·3
Bombay ...	2,537	13,400	5·74	16	55·8
Sind ...	800	183	108·40	19	
Bengal ...	3,450	3,500	20·50	35	49 3
U. P. ...	4,952	7,776	12·20	40	53·9
Punjab ...	3,694	9,940	8·33	36	69·7
Bihar and Orissa ...	3,310	3,961	21	28	32·8
C. P. ...	2,501	7,535	12·82	34	33·7
Assam ...	1,191	600	100	8	27.2
N.W.F.P....	373	1,113	8	31	
Total ...	27,186	75,123			434·7

Mitchell Kirkness Report, pages 79 to 81.

Roads are most developed in Madras and least in Sind. There are still a large number of villages unconnected by any public road.

The Government of India directed their attention to the problem of the co-ordination of rail and road transport in 1933, and they deputed Mr. Mitchell and Mr. Kirkness to report on the state of road and rail competition and the possibilities of their future co-ordination.

They recommended that the comprehensive plan of road development should take into consideration the possibility of linking the more important villages with the public road system. They further recommended that the evils from which public service motor

transport is suffering are largely due to excessive competition and unemployment among buses, and their concentration on the more populous routes. The number of licences for buses on any route might be restricted, the issue of time-tables, publication of schedules of fares, and compulsory insurance might be prescribed. They also recommended that railways themselves should operate motor transport on parallel roads and further that they should be protected from uneconomic competition

For the purpose of the co-ordination of different types of transport, they recommended the concentration of the functions of the Central Government in respect of all forms of communication and transport into one department, and suggested the creation of Provincial Boards of Communications. They further suggested that it was desirable to provide for co-operation and co-ordination outside the headquarters of Government, and that there might be Divisional Committees not only to advise on the control of motor transport but also, within their sphere, to be small counterparts of Boards of Communications.

Soon after the publication of the Mitchell-Kirkness Report the Government of India convened a Road-Rail Conference, at which the representatives of Provincial Governments, and of Class I Railways were present. The Conference was held in Simla on 24th, 25th and 26th of April, 1933, and was opened by His Excellency the Viceroy. The Hon'ble Sir Franck Noyce in his presidential address said "We believe that we have in India a golden opportunity of taking timely action so as to avoid, before it is too late, the disastrous position into which the transport system of some countries appears to have been allowed to drift." The conference after full discussion adopted the following resolutions:—

(*i*) The Conference is of opinion that, in the general public interest, the time has come for increased co-operation and a more intelligent co-ordination of efforts between the various authorities and interests concerned, in the matter of:—

(*a*) further Railway development, and of

(*b*) the further development of road communications, whether used for motor transport or other purposes, so as to secure a more comprehensive and uniform plan of general development than at present exists.

In areas where uneconomic competition between railway and road transport has been proved to exist, such increased co-operation and co-ordination may necessitate the adoption, by mutual agreement,

of measures designed to reduce such uneconomic competition to the minimum compatible with the maintenance of healthy competition.

Any comprehensive or uniform plan of general development must sooner or later involve a gradual expansion of facilities for rural motor transport, complementary to the Railways and to other existing arterial forms of transport, but as internal district communications apart from the main arteries, are largly controlled by local bodies, any intraprovincial co-ordination of effort must necessarily in the first instance be a matter for the local Governments and Legislatures, who, in such matters, should consult, and to the best of their ability, co-operate with the railways and other interests concerned.

(*ii*) In order to ensure increased co-operation and more intelligent co-ordination of effort between the various authorities concerned, this Conference considers that the following measures would be justified :—

(*a*) The control of public service and goods motor transport should be regulated in the interests of public safety and convenience.

(*b*) The number of vehicles licenced to ply for hire should be restricted so as to prevent such competition between all forms of transport as may be contrary to the public interest.

(*iii*) The Conference recommends that the present regulations regarding public service and goods motor transport should be reviewed with the object of amending them so as to afford every encouragement to the development of rural services even to the extent, in exceptional cases, of granting of monopolies for limited periods.

(*iv*) The Conference considers that, in the interests of all concerned a co-ordinated plan should be drawn up for the taxation of motor transport by the various authorities concerned.

(*v*) The Conference considers that suitable machinery should be established at the Centre and in the Provinces to ensure adequate co-ordination between all forms of transport and their future development.

To give effect to these resolutions the Central Government brought forward a bill to amend the Indian Motor Vehicle Act of 1914, but on account of strong opposition the Government did not proceed with the bill. A new bill in a more elaborate form was introduced in April and was carried in September 1938.

The main provisions of the bill are :—

1. The establishment of Provincial and regional transport authorities.

2. More stringent rules for the licensing of drivers and punishment to drivers if the cars are driven by unlicenced persons.

3. Licensing of motor vehicles and restrictions about their use on public roads.

4. Fixation of hours of work of the drivers

5. Power given to Local Government to stop or control motor transport on any road for any class of vehicles, and for any period.

6 Compulsory insurance including insurance covering third party risks. (This will not operate till 1913).

The bill made no provision about the manner of spending licensing fees, fines, and other taxes, but left it to the Local Governments to utilise these, if they desire to do so, for the maintenance of the roads.

SECTION 6.

Personal Observations.

The rail and road competition has come to stay and for the economic development of the country, both systems of transport are indispensible. We cannot annihilate the one or the other. We should attempt to solve the problem however difficult and complex it may be. There are three essential points which should be kept in view in order to arrive at an equitable solution.

(1) Motors should pay proportionate costs of roads.

(2) Private enterprise should not be stifled.

(3) Legislation should not cripple free development of road traffic, by taxation or unnecessary restrictions. Differences should be settled by mutual consent.

The representatives of railways have agreed that they would be satisfied, if the motor traffic pays the proportionate costs of the maintenance of the roads they use. This opinion was expressed by the representatives of British Railways before Sir Arthur Salter's Committee (*vide* Section 4).

To expediate traffic and to minimise accidents, it is desirable that at least on the trunk lines, roads for fast traffic should be separated

from those used for slow traffic. The cost of the construction and the maintenance of fast traffic roads should be borne entirely by motor transport Separation has been successful in several countries, specially in Germany. In India fast traffic roads are separated between Delhi and Shadra and at several places in Gorakhpur District. The cost of the maintenance of ordinary roads which were constructed before motor service came into existence and which are used by pedastrians, cyclists, bullock carts, and camel carts and which are used for all civil and military purposes (called community use) should be borne only partially by the motor transport. Provinces and local bodies collect taxes for the maintenance of roads and the cost of maintenance of motor roads which are also utilised for community usages should be borne by taxes raised by Local Governments specifically for improvement of roads, and taxes on motor vehicles, in equitable proportion.

The total cost of maintenance and new construction of all roads in British India was Rs. 6 crores in 1929-30. (Mitchell-Kirkness Report, p. 81). The figures may be appreciably higher now.

The allocation of the contribution to various classes of motor vehicles is a complicated problem and the Government should soon tackle it on the lines recommended by the Salter Commission (Section 4).

Coming to the next fundamental point that no form of transport should be crippled by restriction and State regulations. This view was approved by the Royal Commission on Railways and Transportation in Canada (1931-32) in the following words :— "It is essential that the country should have the free and unhampared use of the cheapest forms of transport and therefore no restrictions which would unfairly prejudice the road user should be imposed. Any restrictive regulations imposed on the road vehicle will not determine the division of the functions as between roads and railways except to a relatively limited extent. In our view this division of functions will not be best obtained through the arbitrary action of Governments but through the efforts of those engaged in the transport industry. By concentrating less on mutual competition and by turning their energies to the co-ordination of the services they provide, a properly co-ordinated system of transport will be evolved. In our view the true function of road transport, in such a co-ordinated system, is auxiliary and complementary to to the steam railways."

The Indian Roads and Transport Development Association in their memorandum to Messrs. Mitchell and Kirkness emphasised the question of unfair taxation by Central Government and suggested

the appointment of a committee to examine that motor transport is taxed on an equitable basis. The Central Government should decide the amount they should raise for revenue from transport and distribute it in equitable manner among different forms of transport including railways. The revenue duties should be uniform on motor cars and railway engines, motor and railway accessories, motor and engine fuel (petrol and coal). Additional duties may, however, be levied on petrol for the maintenance of roads used by motor vehicles.

The Indian railways are not moving sufficiently fast in providing traffic facilities They have not fully realised the danger They demand on one hand legislative protection on the plea that 800 crores of tax payers' money is invested in this undertaking and they demand freedom from all political influences on the ground that it is a commercial undertaking. If the railways claim and I believe that they justly claim that they should be treated as commercial concerns, then they should follow the method of business houses and promptly put their own house in order. They should improve their services in the same manner as other countries have done, by speeding up trains, specially goods trains, by improving the time table of passenger trains, by providing containers for small consignments of goods, by giving greater facilities to passengers in food and travelling, specially to lower class passengers who are their best customers, by providing cheap excursion and return tickets, and discarding distinctions between home and foreign traffic. Mitchell and Kirkness pointed out in their report that in passengers traffic, the competitions are keen in short distance travelling within fifty miles and it is remarkable that railway fares per mile are greater for short distances than for longer distances. The Royal Commission of Canada, referred to in a previous section, made a similar recommendation. All wasteful competition should in the first instance be decided by mutual consent, but it should not be forgotten that representatives of rail and road often fail to take distant vision of the problem. They consider only the immediate profits and gains and they fail to realise the ultimate effect of such gains and profits on the community as a whole. The legislature should intervene only in the interest of public safety and for keeping balance even between the rail and the road.

Improvement of Roads.—The real problem in India as pointed by the Agricultural Commission is the need of better communications for marketing agricultural produce. Good communication in combination with efficient marketing places where the demand for it is active, secures the equalisation of prices for particular classes of produce throughout the country. These factors react favourably on the price which the average cultivator receives. They frequently

open out to him alternative markets and the element of competition between market and market that follows, usually operates greatly to the advantage of the producer. Defective communications between the point of production and local market hinder the movement of goods and make primary marketing costly, the additional charge ordinarily falling upon the shoulder of the cultivator. In extreme cases, difficulty of communications may leave the cultivator entirely at the mercy of the local dealer who alone has at his command enough carts to undertake the transport of produce to the nearest market.

The need for developing roads in rural areas is universally admitted. There are a large number of villages which are unapproachable for several months in the year and it is desirable that they should be connected with railway stations and trunk lines. Country tracks and third class roads should generally be transformed into metal roads which may be used all the year round. Capital expenditure on such transformation is economically justifiable. Ten bullock carts travelling each way in a day will effect economy sufficient to pay the repairs and interest on construction charges of one mile road. The Provincial Governments realise the necessity of developing country roads but they plead financial insolvency. Paucity of revenue, however, is not a justifiable reason for the failure of our Governments to develop our roads. Capital expenditure should be met by raising loans on the security of petrol and road taxes.

In most provinces, a large proportion of the roads is in charge of local authorities. Their funds consist of local revenues *plus* a block grant from Provincial Governments and special taxes raised by them. The roads under district boards are in neglected condition. Payments for repairs are sometimes made and certificates of completion are obtained when no work is done. It is desirable that the system of inspection by Provincial Governments may be introduced on the lines adopted by Great Britain. The final payment of the grant to local bodies may be given on the production of a certificate by a Government Road Engineer. Rules for the award of road grants should be similar to those adopted in giving grants to educational institutions. The Provincial Governments should be directly responsible for roads between the headquarters of a district and the headquarters of sub-divisions or Tehsils.

The chief difficulty which stands in the way of effective co-ordination between rail and road is the absence of common controlling agency. We need a change in policy and system of administration for the achievement of effective co-ordination.

The motor service at present pays about 8·2 crores to the general revenues of the Central Government; and the Railways by the Convention of 1924 are expected to pay about 7½ crores every year, but they are in arrears by 37·74 crores. In the time of depression the taxes on motor cars were raised by 25 per cent and realised by the Customs Officers and the contributions by the Railways were postponed for future prosperous years. The petrol tax is 10 as a gallon, of which one fourth is credited to the Road Fund. The amount collected by the Central Government in the year 1938-39 was as follows :—

	In Crores of Rupees
Duty on Petrol ...	6·39
Duty on Motors and Motor accessories	1·34
Duty on Tyres and Tubes ...	·33
Duty on Lubricating Oil ..	·14
Total ...	8·20

CHAPTER VII.

Rates and Fares.

SECTION 1.

General.

Rates are transport charges on goods, Fares are transport charges from passengers.

The well-known dictum for fixing rates and fares is: "Charge what the traffic will bear". This dictum is interpreted in different manners.

No better explanation of the term "what the traffic will bear" can be given than is found in the chapters on "Goods Rates" in Hugh Munro Ross's book on British Railways. The explanation given by him is as follows:—

> "One way, the obvious but short-sighted and ineffectual way, of doing this is to charge the highest possible rates and content with the limited amount of business that can struggle to exist in such conditions; that is the principle of charging what traffic will not bear The other way recognises that a small profit, many times repeated, is better that a large one obtained only occasionally and that a large business affords greater opportunities of gain than a small and restricted one Hence, it means that a railway accommodates its charges to the circumstances of the traffic and encourages new customers and new traffic by moderate rates and liberal treatment This is the ideal pointed to by the principle of charging what the traffic will bear"

It really means that the rates should be lowered to the lowest margin of profit consistent with a healthy stimulation of business.

The principles of charging rates and fares recognised by most railway economists are:—

(1) That in ordinary circumstances the cost of the service represents the bottom limit of a rate, while the maximum depends on what the traffic will bear or, as it is now more commonly expressed, on the value of the service to the trader.

(2) That in special circumstances the bottom limit disappears to a certain extent but not below the cost of "constant" expenditure, and the determination of the rates between the two limits is influenced solely by the consideration of securing the maximum traffic. The French Economist M. Colson said that our aim should be to provide the best service at the minimum cost.

(3) Rates and fares affect the development of the country and the movement of trade and hence no Government can absolve itself from the obligation of controlling them.

The French Government accepted, as early as 1846, the principle that maximum and minimum rates and fares should be fixed by law and the railway companies should be authorised to alter rates within these limits with the permission of the Minister It was essential that proposals should be initiated by railway companies and the Minister be empowered either to accept or reject the proposals but not to alter them. In 1862 special tariffs were fixed to sea-ports to help export of merchandise.

The Government of India recognised the importance of fixing rates and fares; and in March 1883 they enunciated the following general principles on which rates and fares should be fixed.*

(1) That the management should principally aim at attracting the maximum quantity of traffic the line could carry at reasonably low rates.

(2) That the rates might vary between limits represented by (*a*) the cost of carriage, and (*b*) the tax which the trade will bear.

(3) That in the case of competition, the principle of rates calculation should be materially altered. While such factors as capital cost, gradients, cost of fuel and carrying power, should be duly taken into account, the rates must ultimately be governed by the necessity of attracting traffic and not by any arbitrary standard of profit.

In a subsequent circular, dated 22nd December, 1887, the Government of India realised the necessity of fixing maximum and minimum rates and fares in the following words :—

"That to protect the public and to prevent unreasonable charges on the part of the railway administration it was necessary for the Government to impose restrictions as regards the maxima fares to be levied for the carriage of all classes of passengers and the maximum rates for all descriptions of goods"

It was also thought, however, that this priniple, although recognised in other parts of the world where railways had been opened, should be slightly modified as the circumstances in India were somewhat different; it was considered necessary to fix maximum as well as certain minimum rates and fares because it was possible for the railways under the guarantee system to reduce the rates in competition with one another to a point where they ceased to be remunerative without the shareholders being affected as they were protected by the guarantee. (Page 85, Ghose.)

"That when once minimum and maximum fares and rates have been fixed, any further interference on the part of the Government in the matter of fares and rates is only a restraint on trade. The Railway administrations, who know their interests best, should be allowed to alter their rates within the prescribed maxima and minima to suit the various conditions under which commercial business is everywhere carried on."

*(Monograph by S. C Ghose, p 27)

The following maximum and minimum rates and fares were fixed by the Government after a long correspondence in 1891 :—

Passenger Fares.

	Maximum per mile. (pies)	Minimum per mile. (pies)
1st Class ...	18	12
2nd Class ...	9	6
Inter Class ...	4½	3
3rd Class ...	3	1½

Goods were classified into five classes. The maximum for the highest class was one pie per maund per mile and the minimum was 1/6th pie per maund per mile. The maximum rate in the lowest class was 1/3rd and the minimum was 1/10th pie per maund per mile. Within the maximum and minimum rates so prescribed railways were free to quote such rates as they considered necessary for the development of traffic. The basis of rates actually adopted "within certain limits" was some times a uniform rate per mile and some times on a telescopic scale, the rate varying with the distance. The classifications were altered from time to time and the present position is described hereafter.

For purposes of charge, commodities are grouped into sixteen classes. Whilst the classification is reasonably uniform for all railways, there are surprising variations in the application of the schedules. Cement, for instance, is carried by twelve Class I Indian railways on seven different schedules, so that the charge for 300 miles varies from 51 pies per maund to 114 pies per maund. Salt is carried on ten different schedules and the same is true of grains and pulses.

The Wedgwood Committee was not in favour of reducing the number of classes but they admitted that there was some ground for the allegation of complexity and the railways would be well advised to give due weight to it.

Rates fall into three divisions, namely: (1) class rates, (2) schedule rates, and (3) station-to-station rates.

(1) *Class rates.*—All commodities are grouped into classes as shown in the General Classification of Goods and the maxima and minima rates are as follows :—

Class	Maxima pie per maund per mile	Minima pie per maund per mile
1	30	
2	42	
2-A	46	100
2-B	·50	
2-C	54	
3	58	
4	·62	
4-A	67	
4	72	
5	·77	
6	83	166
6-A	89	
7	96	
8	1·04	
9	1·25	
10	1·86	

1. The maximum of the class in which a commodity is placed is the ordinary rate per maund per mile for that commodity without terminals, short distance charges and tolls.

Class rates are sometimes quoted which are lower than these maximum rates. These are called "adjusted class rates" and are contained in the Junction Rate Lists.

A rate is sometimes quoted for a commodity equal to the rate of a lower class than that in which the commodity is classified.

(2) *Schedule rates.*—Definition: A schedule rate is a rate quoted on a basis lower than the maximum of the class. It may be on a uniform basis, such as, ·250 pie per maund per mile, or it may vary according to distance or weight on the telescopic (cumulative) principle: A schedule rate may be quoted in any of the following units of quantity: per maund, per ton or per wagon.

The following is an example of a telescopic schedule rate varying according to distance.

For the first 300 miles	. . ·380 pie per maund per mile.
For extra distance above 300 miles but not exceeding 700 miles to be added to the charge for 300 miles.	. 130 pie per maund per mile.
For extra distances above 700 miles to be added to the charge for 700 miles.	... 100 pie per maund per mile.

Schedule rates are distinguished by numbers or letters. To ascertain whether a schedule rate has been quoted for a certain commodity, reference must be made to the Railway's Exception List.

(3) *Station-to-station rate.*—A station-to-station rate is a special rate for the total distance between specific points (station or junction).

Station-to-station rates are as follows :—

(*a*) those between two stations on the same railway, that is, a local station-to-station rate ;

(*b*) those between a station on one railway and a station on another railway ; and

(*c*) those between a junction and a station or between two junctions.

For purposes of calculation of rates each railway is treated as a separate entity.

Mr. Robertson in 1901 had discussed the problem and he said on page 70 of his Report: "On through traffic, that is, traffic going over more than one company's line, all fares and rates should be calculated on the through distance and the reduction should always be applied on the entire distance and not merely on the local distance of each railway." He further said: "For through booking, *i.e.*, traffic passing over more than one railway there should be one general classification of goods for all India, and subject, of course, to exceptions, one scale of rates applicable on the through distance from station of origin to station of destination. This is now the general practice both in England and in America." The Government of India never enforced this recommendation of Mr. Robertson. The practice of calculating rates on the distance to the junction only, still prevails in India and it is to some extent responsible for a good many of the high rates now obtaining, since the traffic only

gets the benefit of telescopic scales of rates on the local distance to the junction, instead of on the whole distance that the traffic is carried. But if the long-distance traffic is to be developed in the manner that such traffic has been developed in America, the distance must be taken from the station of origin to the station of destination and the charges calculated on this through distance at reduced rates. The telescopic rates in fares charged from passengers diminish with distance, but the system differs materially in India from other countries in one respect. In other countries, the telescopic rates are charged between two stations irrespective of the fact whether the travelling is done on one line or on more than one line, but in India the advantage of long distance is given on the same line and fresh journey is supposed to begin at the commencement of the travelling on a different line even if both of them are State railways The system of reckoning all traffic as through traffic makes appreciable differences in rates and fares.

Illustration.—Suppose the rates of rice per maund per mile are ·333 pie for first 125 miles and ·166 pie per mile for additional distance from 126 to 350 miles and ·066 pie per mile for distance greater than 350 miles. Suppose a person sends rice one maund in weight from station A, 500 miles from Delhi on the E. I. Railway, to a station B on the N. W. Railway at a distance of 500 miles from Delhi. The total distance covered is 1,000 miles According to the existing practice of Indian Railways, the distance is split up into two parts of 500 miles each and the tradesman will have to pay 14 annas and 3·3 pies per maund. Had the through rate been charged, as is done in other countries, the rate would have been annas 9 and 10·6 pies on the same schedule.

It is very desirable that rates and fares should be uniform on all the lines and all booking should be treated as one continuous through booking.

Complaints have been made from time to time that some railways charge relatively higher rates for raw materials required by Indian mills, factories and industries as compared with the rates charged to the ports for similar descriptions of traffic for export in their raw condition. Sir Vithal Das Thakersay in his speech in the meeting of the Imperial Legislative Council held in Calcutta on 1st March, 1912, while moving his Resolution for the appointment of a Committee of Inquiry to investigate the policy followed by railways in regard to the fixing of goods tariffs and its effects on the development of Indian industries or on inter-provincial traffic quoted several cases of discrepancies. He drew attention particularly

to the cotton rates on the North Western Railway which were lower to Karachi than to Delhi. The rates to Delhi not only concern the cotton mills in Delhi but also the mills in the United Provinces which may mant to use the Punjab cotton.

In England, the law provides that there should be no difference between the rates charged for home or foreign merchandise in respect of the same or similar services, and that the British Railways should justify before the Permanent Commission any difference between such charges.

"This general practice of permitting each railway to have a separated classification and a separate scale of rates applicable on the local distance to the junction," says Mr. Robertson, "only leaves the public much uncertainty as to what the rates are and gives the goods and other clerks a great deal of unnecessary trouble in calculating the charges and preparing the way-bills and invoices All rates should be calculated on the prescribed scale by the shortest route and divided in mileage proportion between the railways forming the shortest route, or, between the railways forming such other longer route as may by mutual agreement be used for the traffic."

Mr. Robertson advocated the reduction of rates and fares also. He thought that, considering the cost of construction and working in England, the rates and fares in India should be about one-sixth of those charged in England (page 69.)

The rates then quoted by Mr. Robertson were as follows:

Passengers.

Rates per passenger mile.

	England	India
1st Class ...	19·69	12·75
2nd Class ...	13·08	5·49
3rd Class ...	9·84	2·31

Goods.

Rate per ton per mile.

Merchandise ...	23·75	6·72
Minerals ...	9·34	3·55

Keeping in view the cost of construction and working, Mr. Robertson recommended that passengers fares should be lowered from 18 to 40 per cent and the rates for general merchandise by about from 30 to 60 per cent. In advocating this reduction in rates and fares, Mr. Robertson in paragraph 196 of his Report said: "Any reductions of fares and rates must necessarily result in a falling off of revenue in the first instance; but, if the experience of other countries similar to India may be taken as a guide in this respect, impetus which the reduced rates will give to travel and commerce will be so great as to throw fresh vigour into the whole business of the country and to amply repay in a very short time

the temporary loss." Experience in America, quoted in the previous chapter, verifies this statement.

Terminal Rates.

The English railway companies were in the beginning the owners of the track and they allowed people to use the track by paying toll and providing their own carriages and locomotives. The railway companies did not render any service in handling goods. When railway companies took upon themselves the duties previously rendered by private carriers, they had to provide facilities at railway stations for which they charged an additional amount under the name of Terminal Tax. The traders contended that railway companies were not entitled to levy additional taxes. A Select Committee of the House of Commons was constituted in 1881 to investigate the problem and it remarked:—

> "The charges which railway companies are entitled to make are of two kinds, those pertaining to them as owners of the railway and those attaching to them as carriers The charges of railway companies in their character consist mainly of remuneration for the mere conveyance of goods, and this remuneration includes tolls for the use of the railway, for the use of carriages and wagons, and for the supply of locomotive power"

The companies contended that this charge comes into operation when the train begins to move; the companies now supply facilities which private carriers used to do in the past for which they are entitled to charge an additional amount under the name of terminal rates.

The Railway Rates Advisory Committee whose final report led to the passing of the English Railway Act of 1923 recommended: "In the standard rates to be fixed by the tribunal the conveyance rate and terminals should be separately specified, and when the tribunal is called upon to fix an exceptional rate it should equally specify how much of the exceptional rate is for conveyance and how much for each terminal."

The British Act of 1921 in Section 61 fixed the standard terminal rates. The past history justifies the British Railways to charge terminal rates, but in India the functions of Railways as owners of track and public carriers were never differentiated. In India the term "terminal rates" is used in a different sense. The rates are used to adjust variable and constant charges described in Chapter IV, Section (9) and they vary from 1 pie to 16 pies a maund.

Owner's risk.—Abnormal difference of rates between goods sent at owner's risk and those sent on the responsibility of railways

is not justifiable. The railways are responsible for the damage done to the goods, if it is proved that they failed to exercise reasonable care, but the traders, who do not want to undertake any risk, should insure the goods with an insurance company.

The railway administration ought not to assume the function of an insurance company. It should take all reasonable precautions in the safe delivery of goods to the consignee and should exercise reasonable control over its own servants and it should be responsible for all damages due to neglect. But it is the business of insurance companies to meet the loss effected under abnormal circumstances.

Maxima and Minima.—The railways till recently had the monopoly in traffic and the Government of India, as in other countries, fixed the maximum rates and fares to safeguard the interests of the travelling public and the trade. When alternative routes were established by different railway companies, they began to lower their rates, but the rate-war did not affect the railway companies in India as the interest on their share capital was guaranteed by the Government. It affected only the tax-payers. The Government of India were forced to fix the minimum rates also. There exists, however, great divergence between the maximum and the minimum rates. The maximum is 18½ times the minimum. The minimum rate should depend on variable charges (or dependent costs), *i.e.*, the actual additional cost of haulage including the pay of persons engaged in loading, etc. The variable charges or dependent costs are at present about 45 per cent. of the working expenses. In some well administrated railways it is as low as 30 per cent. The variable and constant charges in working expenses are described in Chapter IV, Section 9.

The maximum should be fixed according to the convenience offered to and appreciated by tradesmen.

There are other minor points to which attention was drawn by the Acworth Committee. They are minor points but from the point of view of tradesmen they are important.

The Acworth Committee remarked that steps should be taken to reduce the delay in settling claims for loss and damage. It also recommended that the existing practice of merchants having to make petty payments for securing wagons should be stopped. It said :

" It is not too much to say that petty payments for wagons have now grown into a system of organised black mail The Railway Board and the railway officials, though they hesitate to admit that the evil is as serious and widespread as the traders claim,

do not attempt to deny its existence They deplore it but are disinclined to accept responsibility The practice, they say, can only be stamped out by convicting and punishing the bribe-taker. This has been done in some cases, but not with sufficient frequency or certainty to stop the practice If conviction of the bribe-taker in a law-court were the only means of stopping the practice, it would evidently continue indefinitely, for, normally, the only witness against the bribe-taker is the bribe-giver, and as he is participating in the crime and is equally liable to punishment, he can hardly be expected to come forward to give evidence And this, we are convinced, can be done as soon the authorities are sufficiently in earnest about the matter We feel that the evil would not have grown so serious if the Railway Board had appreciated its magnitude and after a thorough investigation had grappled with it as a general question affecting all India and had insisted on reforms of the methods of wagon distribution "

No action was taken by the Railway Board on this recommendation. This evil has now become particularly serious on account of road competition.

SECTION 2.

Tariffs in Different Countries.

(*a*) *United States of America.*

The characteristic ferture of the American railway tariffs is the method of their establishment. They are not based on an estimate of what the traffic can bear but on calculations, made by the railways themselves and confirmed by the Inter-State Commerce Commission, of the cost price of transport and the minimum return on the invested capital. As the American railways which developed under a regime of liberty still operate a fairly large number of competing lines, the tariffs are not based on distance but are applied to fixed itineraries (traffic relations). Thus, the carriage of goods from New York to Chicago costs a fixed sum irrespective of whether those goods are transported over New York Central line, the Lehigh Valley, or the Pennysylvania railway, although the distance by each of these lines is different.

There are in the United States, as elsewhere, general tariffs and special tariffs. The tariffs are divided into six principal classes.

(*b*) *Belgium.*

The Belgian tariffs differentiate between small consignments and wagon loads of five tons and over. Small consignments have, like post office, a flat rate, that is, the charges are the same for all distances. This facility can be given by a small country like Belgium. There are different rates for fast and slow goods service.

(*c*) *Germany.*

The German tariffs are established autonomously by the Reichsbahn and ratified by the public authorities.

The General Tariff.—The general tariff is divided into two parts; (*a*) the tariff applicable to consignments of less than five tons, and (*b*) the tariff applicable to consignments of five tons or over.

The first part has no classes. All goods, irrespective of their nature, are subject to the same rate schedule. The second part, which includes a very detailed nomenclature, groups all the goods appearing in it into seven classes.

The German tariff system differentiates between slow, fast and accelerated fast traffic. As a rule, the charges applicable to fast and accelerated fast traffic are, respectively, double and treble the basic charge.

All the general tariff charges are established on sliding scale according to distance.

The *special tariffs* are the variants of the general tariff applicable to specific classes of goods.

The railways in Germany are administered as a single unit and telescopic rates are applicable for journeys between any two stations.

(*d*) *France.*

The French tariffs, which are established by the railway administrations themselves subject to confirmation by the public authorities, are based on the *cahier des charges*. This *cahier des charges* is a law supplementing the terms of the concession. A distinction is, however, made between (*a*) the general slow goods traffic tariff (*petite vitesse*); and (*b*) the general fast goods traffic tariff (*grande vitesse*). The general tariff for slow goods traffic groups all the different types of goods in *six* series.

No distinction as to the weight of the goods is made in the tariff. The same schedule per ten kilometre applies to all quantities alike. All consignments of parcels up to 40 kg. per consignment are subject to a uniform charge which, so to speak, constitutes a seventh series. In this series no account is taken of the nature of the goods, the charge being established on a kilometric basis instead of on a sliding scale.

The general tariff for *fast* goods traffic makes a distinction between parcels and goods, foodstuffs, gold and silver, coin and bullion, valuable papers, works of art, vehicles, coffins, live stock. No distinction is made in the nature of other goods; there is, therefore, no classification. The charge is established on a sliding scale and decreases with the distance.

(e) United Kingdom.

The tariff in the United Kingdom has one peculiarity It provides a further charge known as a "terminal charge" for the provision of station accommodation and other services. This additional charge was resisted by the traders, but it received the assent of Parliament. Attempt was made to charge at a fixed scale based upon either the cost of the service or the distance of conveyance but both these systems were found impracticable. On account of competition and the appreciation of service by the traders the system of exceptional rates came into force under which about 70 per cent of the traffic actually passed. The application of the principle of "charging what the traffic will bear" has its inherent difficulties and no doubt abuses and errors have arisen out of it as no fixation of rates can be scientific and even the out-of-pocket expense is not precisely ascertainable. It is also difficult to ascertain the cost of haulage. A prudent Company by spending more money on electrification, reduction of gradients, and other means may reduce the working expenses and it should not be penalised for prudent management.

Under the Railway Act of 1921 an entirely new principle was attempted. Rates and charges were to be fixed by a new Court styled 'The Railway Rates Tribunal' on a level which will, with other sources of revenue, so far as practicable, yield with efficient and economical working and management, an anaual net revenue known as the "Standard Revenue."

The broad effect of the Act of 1921 in regard to rates and charges and profits can perhaps be summarised as follows :—

(1) Rates and charges borne by railway users are regulated as regards their general level by the Rates Tribunal and particular grievances are also to be corrected by the Tribunal.

(2) An upward limit of railway profits has been fixed subject to increase if a surplus is realised. These profits, if obtainable, will yield a reasonable return on capital, and this will encourage the financing for future development.

(3) This fixation of profits, with its attendant regulation and supervision by the State, places upon the State the moral responsibility of ensuring that the rights of the railway stock-holders shall not be prejudiced by Government action or inaction.

The Railways Act of 1921, while it lays down a system of standard charges for all classes of traffic, and not maximum charges as in the past, provides that such charges shall be made without

variation in either direction, " unless by way of exceptional rate or exceptional fare". It was contemplated by the Government when that Act was passed that with a new classification the greater number of exceptional rates would cease to exist. In some quarters, even the hope was held that in a few years all such charges would cease, and railway rates be reduced to a simple scale applicable between any two points, but practical considerations rendered it incapable of application.

The number of special tariffs is very high. The nomenclature of the general tariff provides for the possible application of these tariffs to almost all the goods it contains. The conception of the special tariff proper only applies to reductions of more than 40 per cent, the railways being at liberty, in certain determined relations, to grant reductions of up to 40 per cent on their tariff which is always a maximum tariff.

From 1st June, 1928, through rates were charged on a continuous mileage scale and, in addition, the charges were determined by distance between the points of consignment and not the distance the tariff is actually worked over.

All the British tariffs are based on distance, the charge becoming less as the distance increases. In this connection there are four scales of rates: (*a*) for the first 20 miles; (*b*) for the next 30 miles: (*c*) for the next 50 miles; (*d*) for distances exceeding 100 miles. The rate applied varies considerably, the rate applicable beyond 100 miles being in certain cases almost one fourth of that applicable up to 20 miles. This graduation is bound to affect motor competition which is favoured by the relatively high rates for the first 20 miles. The joint tariff of the British railways consists of two principal parts: the General Classification of Merchandise other than Dangerous Goods, and the Classification of Dangerous Goods; each of the two divisions comprises twenty-one classes, the twenty-first being the highest-rated class. The British tariffs are as a general rule based on what the traffic can bear. The number of classes and the right of the railways to grant reductions of as much as 40 per cent without having to apply for special authorisation and even greater reductions with the sanction of the Railway Rates Tribunal, render this tariff exceedingly flexible.

It should be noted in this connection that the number of privately owned wagons (about 520,000) is almost as great as the number belonging to the railways (about 632,000). The development of the privately-owned wagon in Great Britain is due to the liberal view taken in that country in matters of transport. The

railway is still regarded as a public way on which the vehicles of all may travel.

The fixation of rates is a very complex problem and according to W. V. Wood and Sir Josiah (now lord) Stamp the only sound basis is that the rates shall cover the minor direct costs and contribute what the traffic can bear towards the major indirect costs subject to public regulation, so that the whole of the rate shall not be excessive.

SECTION 3.

Railway Rates Advisory Committee.

This Committee was established on 1st April, 1926, to investigate and report on such cases as might be referred to it by the Railways Department on the following subjects :—

(*a*) Complaints of "undue preference" ;

(*b*) Complaints that rates are unreasonable in themselves ;

(*c*) Complaints or disputes in respect of terminals ;

(*d*) The reasonableness or otherwise of any conditions as to packing or articles specially liable to damage in transit or liable to cause damage to other merchandise ;

(*e*) Complaints in respect of conditions as to packing attached to a rate ; and

(*f*) Complaints that railways do not fulfil their obligations to provide reasonable facilities under Section 42 (3) of the Indian Railways Act.

The President of the Committee is a distinguished lawyer. The other permanent Member is a senior railway officer representing railway interests. Usually a third Member representing commercial interests is appointed when each case is referred to the Committee for report, from a panel elected or nominated by various commercial bodies. The number of cases enquired into and reported on by the Committee was 23 in five years, the average being less than five cases in a year. The expenditure on this Committee was as follows :—

	Rs.
1926-27	... 1,38,000
1927-28	... 1,48,000
1928-29	.. 1,67,000
1929-30	... 1,56,000
1930-31 (estimates)	... 1,80,000
1931-32 ,,	.. 1,45,000

The Railway Retrenchment Committee of 1931 made the following recommendations :—

" We are of opinion that, in view of the very small number of cases investigated by the Committee in the last five years, a permanent body is unnecessary The Committee as such should be abolished, but the facilities that are at present available to the public for having complaints against railway administrations referring to undue preference, etc, investigated by a more or less independent tribunal should not be withdrawn An *ad hoc* committee appointed from time to time with a retired High Court Judge, or other eminent lawyer to preside over its deliberations with the assistance, as at present, of a railway and a commercial representative to be associated with him, should be quite sufficient. We feel that such an arrangement will be much cheaper than the present one, as there is no dearth of public men in India to accept such duties without demanding high rates of remuneration The average expenditure on account of this Committee has been about Rs 1,60,000 With the institution of an *ad hoc* committee as we recommend the expenditure ought not to be more than half a lakh a year

The Wedgwood Committee noted the fact that the existence of the Railway Rates Advisory Committee does not appear to be generally known. It is probably due to the fact that its headquarter is located not at a business centre, but in a health resort station for the benefit of its President. The Wedgwood Committee recommended an improvement of present arrangements. The Railway Rates Advisory Committee, as it is now functioning, is an unnecessary burden on the Indian tax-payers. It should either be abolished and replaced by an *ad hoc* committee as recommended by the Railway Retrenchment Committee or its functions should be widened. Its headquarters should be at Delhi or Calcutta, and every person who is aggrieved by any action of Railway administration should have a right to appeal to the Committee. The Railway Board in a memorandum dated 20th September 1939, opposed the proposal of an *ad hoc* committee on two grounds :—

(1) The Inter State Commerce Commission in the United States is a permanent body (2) an *ad hoc* committee like an *ad hoc* Tariff Board will not be popular. The analogy is not correct.

The Rates Advisory Committee should be empowered to listen to the appeals preferred by any merchant against the Railway administration for closing a stations for certain classes of articles and for putting certain commodities in the wrong classes mentioned in the Goods or Coaching Tariffs.

SECTION 4.

Rates Tribunal.

The question of a rates tribunal was discussed by the Acworth Committee and it recommended the establishment of a Rates Tribunal (Art. 156) consisting of an experienced lawyer as a chairman and two members representing railway and commercial interests, with power to add additional members. The Committee

(in Art. 158) said :—"The jurisdiction of the new Tribunal should, we think, embrace all questions of the reasonableness of rates even within the contractual maxima and minima and of the conditions attached thereto, whether the questson be the unreasonableness of the rate or its unreasonableness as compared with the rates charged to other persons or at other places in what are alleged to be comparable conditions. The Tribunal might have jurisdiction in respect of the obligation to provide reasonable facilities, a matter which at present also has to be determined by a railway commission." The Committee further recommended that, in accordance with the Canadian precedent, provision should be made for appeals to the Governor-General.

The problem of appointing a Rates Tribunal, as discussed by General Hammond in his memorandum, dated the 5th August 1931 to the Secretary of State, recommended the establishment of an independent Rates Tribunal. "In the first place, I would like to recommend", said General Hammond, "that the full powers over rates and fares now held by the Railway Board should be transferred to an independent Tribunal."

He further recommended that all control whatsoever over such questions should be removed from the Railway Board or their successors in administration and, following the Canadian precedent, be placed in the hands of an independent Tribunal. It would seem advisable to place the question of safety also under the Tribunal. Railways in Indian States are now in most cases inspected by Indian Government Railway Inspectors, and so again there would be no substantial departure in principle from the present state of affairs.

"It may seem strange thus to place duty of inspection on a body whose primary duty is to give decisions on matters of rates, but I can claim in support of my proposal", says General Hammond, "that both the Inter-State Commerce Commission in America and the Board of Railway Commissioners in Canada have shown that the functions are not incompatible."

The recommendations of General Hammand along with the suggestions of the Secretary of State were examined by a special Committee convened in London in 1933, which included representatives of various parties in the Central Legislature (Chap. I, Sec. 13). The Committee in paragraph 11 of its report recommended :—

"The Federal Government shall lay down regulations for safety on all the Indian Railways and one of the Departments of the Federal Government, other than that of railways, shall be responsible for the enforcement of such regulations, subject in the case of the Indian States to the provisions of their respective Instruments of Accession."

Maximum and minimum rates and fares shall be fixed by the Railway Authority subject to the control of the Federal Government.

Any individual organisation having a complaint against a railway Administration under the control of the Railway Authority in respect of any of the matters which may at present be referred by the Railway Department to the Railway Rates Advisory Committee, may have the matter referred, under such conditions as the Federal Government may prescribe, to an Advisory Committee to be appointed by the Federal Government. Before the Federal Government may prescribe any order on a recommendation of the Advisory Committee it shall consult the Railway Authority.

The Government of India Act, 1935, did not establish a Railway Rates Tribunal on the lines of the British Act or on the lines recommended by General Hammond but in Section 191 of the Act it created a Railway Rates Committee with advisory functions.

Section 191 reads :—

"The Governor-General may from time to time appoint a Railway Rates Committee to give advice to the Authority in connection with any dispute between persons using, or desiring to use, a railway and the Authority as to rates or traffic facilities which he may require the Authority to refer to the Committee."

The Act in Section 196 created a 'Railway Tribunal' which is more a court of appeal than a tribunal created by the British Railways Act of 1921.

SECTION 5.

Personal observations.

The competition between rail and road as pointed out in the previous Chapter is keenest within a zone of 75 miles and hence it is desirable to revise the present telescopic rates and discard the system of higher rates for the first 100 miles. All traffic, as suggested by Mr. Robsertson and now followed in every other country, should be considered through traffic. The present differentiation between home and foreign traffic should be dispensed with and telescopic rates should be charged for the entire distance. The maximum and minimum rates should be fixed by the Government on the recommendation of an impartial committee. The difference between the maximum and the minimum rates should not by very wide as at present but the margin between them should be narrow, and the Railway Board, and in future the Federal Railway Authority, may be permitted to fix and alter rates between these limits. Each Railway Administration should be permitted to quote special rates between any two stations in its own zone, but special rates between two stations on different lines should be fixed by the Railway Board.

If any party is aggrieved at the fixation of special rates or general rates, it should have the privilege of appealing directly to the Railway Rates Advisory Committee, and in future to the Railway Rates Committe created by the Government of India Act.

The rates and fares of a commodity should be the same on all the lines. There exist at present two difficulties is enforcing the principle :—(1) The cost of haulage is not uniform on all the railways. Some railways are over capitalised and the overhead charges consequently are very heavy. (2) The railway lines near coal-fields save the expense of carrying coal over long distances. These difficulties will gradually be overcome by the system of amalgamation and redistribution which is discussed elsewhere.

The present goods tariff is very complicated. Goods are divided into *sixteen* different classes and one and the same article is put under different classes by different companies. The maximum rate in the first class is ·38 pies per maund per mile and the maximum in the 10th Class is 1·87 pies. It is desirable that these classes should be simplified and reduced from 16 to 6 and the same article should be put in the same class on all the railways. Cheaper rates should be quoted for full wagon loads. It is desirable that these rates should be applied to lower quantities, say 200 maunds, by using containers. Rates in India are very high, and their enhancement by 12½ per cent will prejudice natural growth of commerce and industry.

In passenger traffic, greater facilities should be provided by issuing more freely excursion, group-travelling and return tickets and restrictions about distance should be dispensed with. The system of issuing cheap tickets for round journeys may be introduced.

Round journey tickets are tickets issued at any station and ending at the same station. The journey may be performed in any manner on any line (even covering the same part of the line several times) within the prescribed time. The fare is charged on the mileage covered by the passenger who gets the advantage of telescopic rates.

CHAPTER VIII.

Labour.

The running of a railway involves risk to the life, health and property of those who use the railway, a risk that the user cannot avoid owing to the monopoly position held by the railways. It also involves risks to outside third parties. In the year 1937-38 the number of passengers killed was 320 against the deaths of 233 railway servants, and the number of persons other than Railway servants or passengers who died on account of Railway accidents was 2,817. The risk becomes a positive danger, involving damage to life and property, when the railway staff is overworked, overtired, insufficiently nourished or clothed, too young or too old, or not sufficiently or correctly trained. The risk is increased by the fact that the railway is obliged to maintain a regular service, and cannot, for staff reasons simply, cancel the running of a particular train. This explains why the State has, from the very beginning, intervened in the relationship between the railway and its employees.

The legislative measures adopted for the provision of amenities for industrial labour apply also to Railway labour and specially to labour in Railway workshops. The enactments by the Indian Legislature as regards the above are described in Section 5.

In 1930, the Indian Railways Act, 1890, was amended by the inclusion of an additional Chapter (Chapter VI-A) which makes provision for the hours of employment and periods of rest of railway servants consequent on the ratification by the Government of India of International Conventions adopted at Washington in 1919 and at Geneva in 1921 (described in Section 2). The Governor General in Council issued in 1931 rules for regulating hours of work of Railway servants. It was necessary to provide for the inspection of Railway establishments in order to ensure that Railway administrations were correctly carrying out the provisions of the Law. A temporary gazetted post of Supervisor of Railway Labour was created with effect from the 1st April, 1931, and in order to allow this officer to carry out his duties, four subordinate posts of Inspectors were created at the same time (Section 7). With effect from the same date, Chapter VI-A of the Indian Railways Amendment Act was formally applied to the North Western and East Indian Railways. In the following year, *i. e.* on 1st April, 1932, the Regulations were further applied in the same way to the Eastern Bengal Railway and the Great Indian Peninsula Railway, two additional Inspectors being added to the Supervisor's staff.

These regulations were extended to the B. B. & C. I. and the M. & S. M. Railways with effect from 1st November, 1935, and to the B. & N. W. Railway with effect from 1st October 1937. The Railway Member in his budget speech (1940-41) said. "During the year we approved the inclusion of South Indian and Rohilkhand and Kumaon Railways and we feel that, in the present position, we can hardly postpone for another year an extension to Bengal Nagpur and Assam Bengal Railways." The number of Inspectors has now been increased to 18.

SECTION 1.

Recruitment of Railway Labour.

Railways are the biggest employers of labour in India Labour in Railways may be divided in three groups. (1) Labour employed in the engineering department for the maintenance of the permanent-way ; (2) labour employed in the transportation and commercial department, including station, running and shed staff ; and (3) labour employed in the workshops of the mechanical departments.

The engineering department gives employment to the largest single class of labour, namely gangmen, who are largely unskilled and consist mainly of hereditary agriculturists with a decided preference for agricultural work. As a result, being generally recruited locally, they are inclined to absent themselves at sowing and harvest seasons in order to work for the land. They are engaged by the permanent-way inspectors who also appoint the semi-skilled workers. The skilled artisans are partly recruited by these Inspectors or by the Works Subordinates concerned.

The transportation and commercial departments cover a wide range. Porters and other unskilled workers at the stations are usually recruited by Station Masters or Traffic Inspectors. The latter also appoint pointsmen, signalmen, shunting porters and other semi-skilled labour, while artisans and other skilled workers are appointed by senior subordinates.

The other important class of railway servants to be considered is that engaged in large workshops, usually locomotive, carriages and wagon shops, where labour is recruited as and when required. The supply of unskilled labour is plentiful, and the general practice is for candidates to be appointed by Works Managers on the recommendation of Foremen. It appears that, as a rule, semi-skilled men are recruited by promotion after they have acquired some skill and experience in the unskilled ranks, and some ultimately develop into skilled workers earning promotion according to merit. Other skilled labour is obtained from outside

applicants trained in particular trades and, to a small but increasing extent, from apprentices drawn from literate or semi-literate classes and trained in the workshops for periods of from four to six years.

SECTION 2.

The International Labour Organization. (I. L. O.)

Washington and Geneva Conventions.

The International Labour Organization is an autonomous institution functioning within the general frame-work of the League of Nations. The preamble to its constitution says :—

"Whereas the League of Nations has for its object the establishment of universal peace, and such a peace can be established only if it is based upon social justice".

Every member of the League of Nations is a Member of the I. L. O., but there are several states like the United State, Brazil, Chili, Hungary, Peru and Venezuela which are the members of the I. L. O. but not members of the League of Nations. The members of the League do not pay separate contributions to the I. L. O., but the States which are not members of the League contribute to the funds of the I. L. O. The expenditure of the I. L. O. for 1940 is about £438,000, the greater part of which, about 94 per cent, is paid by the League which has financial responsibility for its maintenance. In all other respects the I. L. O. is completely independent. Its actions and procedure are in no way under the control of the Assembly or the Council of the League

The I. L. O. has established at its own expense a branch in India located in New Delhi. This branch watches economic problems on behalf of the I. L. O.; it gives economic advice to various bodies and individuals and supplies information about the I. L. O.

The International Labour Organization holds an annual conference usually at Geneva, though the first conference was held at Washington in 1919. The conventions adopted by the various conferences are sent to the Member-countries and it is the function of the legislature or other "competent authority" of the various countries to ratify or reject them. These conventions are thus only draft legislative proposals which the Member-States have to consider. The actions taken by the Indian Government on the conventions applicable to railway labour are described in a later section.

Washington Convention of 1919.—Though the first session of the International Labour Conference held at Washinton in 1919 adopted

six Conventions, the one commonly known as the Washington Convention in Railway circles is Convention No. 1 dealing with Hours of Work in industry. This Convention applies, among other categories of industrial workers, to labour employed in all forms of transport, and provides that working hours shall not exceed eight in the day or 48 in the week except in the special cases provided for. For persons employed in shifts, longer work-periods are permissible, provided the average number of hours over a period of three weeks or less does not exceed eight per day and 48 per week. In "continuous processes" also the limit may be exceeded, but the working hours shall not exceed 56 in the week on the average. Art. 10 of the Convention permits the application of a 60-hour week in British India. This Convention came into force on 13th June, 1921, and has so far been ratified by 23 countries including India.

Geneva Convention of 1921 —Likewise, though the third session of the International Labour Conference held at Geneva in 1921 adopted seven Conventions, the one which applies to Railway workers is Convention No. 14 dealing with Weekly Rest in Industry Article 2 of this Convention provides that the whole of the staff employed in any industrial undertaking (and industrial undertakings include those employed in the transport of passengers or goods by road, rail, or inland waterway), public or private, or in any branch thereof shall, except as otherwise provided for, enjoy in every period of seven days a period of rest comprising at least twenty-four consecutive hours. This Convention came into force on 19th June 1923, and has so far been ratified by 31 countries, including India

SECTION 3.

Action taken by Foreign Countries to Protect Railway Labour.

Great Britain.--The relations between the railway companies and theworkers are defined by the Railway Act of 1921, which provides for theestablishment of joint councils. All questions relating to rates of pay, hours of duty, and other conditions of service are, in default of arrangement between the companies and the railway trade unions, referred to the Central Wages Board, or on appeal, to the National Wages Board. The Railway personnel has the 8-hour day. The employees who are paid monthly salaries have vacation of 12 to 18 days per year. For Sunday and night work the workers are paid 25 to 50 per cent higher than the normal rates.

The railway companies have built dwelling-houses which are rented on cheap rates. In addition, the companies have

provided at the railway stations modern sanitary arrangements for the locomotive and train crews, as well as dining-rooms ; where these do not exist the workers are allowed special rates in the station restaurants. Certain categories of workers are required to wear uniforms. Those employees who come in direct contact with passengers are furnished with uniforms free of charge.

Canada.—Conditions of work and wages are determined on the basis of negotiations with the management of the railways. Disputes are submitted to the "Railway Board of Adjustment." A weekly working period of 48 hours is prescribed. Overtime is paid at 50 per cent more than the normal rate, and an additional 10 per cent is added for overtime in excess of the 48-hour week. Special wage-classifications are included in every wage-agreement. Train-crews are paid in proportion to the length of the distance covered. The majority of the other employees are paid on an hourly basis. The two largest railway companies (Canadian Pacific and Canadian National) have established pension funds. The railways offer free transport of building material for the construction of homes by their employees. The wearing of a uniform is compulsory. For certain categories of employees it is furnished free of charge, while others must bear half the cost.

France.—After a long parlimentary struggle the working time for railway workers was fixed at a maximum of 8 hours à day, on the average, and 2,384 hours a year. A rest period of at least 10 hours must separate two successive work-periods and two days of rest may not be separated by more than 10 working days.

Belgium.—The law establishing the Belgian National Railway Company, dated July 23rd, 1926, provides that the Staff Regulations are to be established by a Commission equally representing both parties, whose members are to be appointed by the Council of Administration and the labour organizations, respectively. In the Staff Regulations thus established, provision is further made for the formation of a Central Commission, and several regional commissions on a similar basis of equal representation. Among the functions of the Central Commission are : examination of all labour contract, questions touching the safety and health of the personnel, as well as questions directly affecting the workers ; the formulation of an opinion on all questions of a general character on which the Commission may be consulted by the Minister of Railways, the Council of Administration, or the General Management, especially in cases where an indirect interest of the personnel appears to be involved ; participation in the management of institutions for the benefit of the personnel. The regional commissions co-operate, among other things, in the settlement of questions

regarding rewards and promotions. The normal working day is set at 8 hours. The first two hours of overtime are paid at 25 per cent above the normal rate, and all further overtime at 50 per cent above the normal rate. Overtime on holidays is paid at double the normal rate.

"Working time" is defined as including not only the actual time of service on the locomotive or train, but also the time strictly necessary for indispensable prepartion at departure and arrival, as well as the time spent in readiness for work in the station, or the shop, and all interruptions of work outside the place of residence, if they do not last longer than eight hours. If the personnel has an interval of more than two hours away from the place of residence, this time is deducted from the actual working time, and the service period in which this interruption falls is prolonged by two hours. Every absence is further counted as working time which is devoted to examination or giving of evidence in court in suits concerning the railway itself, and so is the time passed in theoretical training courses.

Switzerland.—Working time is defined by the law of March 6th, 1920. Only the personnel actually employed on the trains and the permanent way comes under the above law. The shop workers fall under the general laws governing industrial labour. There is no special legislation for office workers. The working time may not exceed a daily average of eight hours on a fortnightly basis. If the working time is extended to 10 hours owing to lateness of trains, this time must be made up for by shorter hours on succeeding working days. Only time in excess of the 8-hour average on a *fortnightly* basis counts as overtime; it is then paid 25 per cent higher than the normal rate. The number of hours of overtime may not, however, exceed 150 in the year. Time passed in readiness for work is not counted as working time; but the sum of working time, and the time spent in readiness may not exceed 13 hours daily. Rest-periods must be of at least 11 hour's duration.

Germany.—The 8-hour day was established as standard, but prolongation up to 10 hours was permitted. The emergency law of 1927 about hours of labour confirmed these provisions. For the majority of the workers the hours of work are fixed either by the Staff Regulations or by the prescriptions regarding duration of service, or by the wage agreement. The weekly working time varies between 48 and 60 hours.

Intervals of specified duration are not provided for. Every interruption occasioned by operating or traffic conditions and last-

ing thirty minutes or less is counted as "readiness for service;" only interruptions of work lasting more than 30 minutes are considered as intervals. Resting time is defined as including every period of time free from service requirements and lasting, in the case of locomotive workers, at least 10 hours without interruption, provided this rest-period is passed at home. With a view to suitable arrangement of Staff rosters, off-duty periods of less than 8 to 10 hours may also be counted as resting time, but they must last at least 5 hours. Compulsory old age and disability insurance has been in existence since 1889, its scope being extended in 1911. On March 31st, 1932, the number of unemployed workers in Germany was 6,034,100. Of these, 1,578,788 were cared for by unemployment insurance. The remainder were at the charge of the Emergency Relief, the local welfare funds, and private charity. The total cost of unemployment relief amounted to 3 billion marks. The rates of aid to part-time workers are in line with those paid to the unemployed. In order to end this severe national crisis by stimulating the public labour market, the Government urged the creation of possibilities of reincorporating part of the unemployed in economic life. Thus the German Reichsbahn set up a programme for the relief of unemployment which was financed by a 4½ per cent tax-exempt National Railway loan. The Reichsbahn recently spent another 100 million R. M. for the creation of employment, which it was obliged to finance from its own resources.

United States of America.—The duration of the work-period of the employees is settled partly by legal enactment, partly by staff regulations and the decisions of the competent bodies, and partly by wage agreements. Federal legislation concerning train-crews includes the law of 1907, known as the "Sixteen-Hour Law," and the law of 1916, known as the "Adamson Act". The Sixteen-Hour Law prescribes for interstate railways a maximum work-period of 16 working-hours; extra hours are, however, permitted in case of accidents or "Acts of God." For the signalling and switching staff, this law prescribes a daily work-period of 9 hours, or, in the case of any one day, of 13 hours. The Adamson Act is concerned, with the same persons as the Sixteen-Hour Law described above. It provides that, beginning from January 1st, 1917, the normal working day shall be fixed at 8 hours in all labour agreements and service regulations.

Under the old Railway Labour Act (Adamson Act), disputes over wage-scales and working conditions had to be submitted to an arbitration board.

SECTION 4.

Royal Commission on Labour.

The frequency of strikes, general labour unrest, and the influence of the conventions adopted by the I L. O. at its annual conferences necessitated a thorough examination of the labour problem in India.

A Royal Commission was appointed in 1929 under the presidentship of John Henry Whitley to enquire into and report on the existing conditions of labour in industrial undertaking and plantations in British India, on the health, efficiency and standard of living of the workers, and on the relations between the employers and the employed, and to make recommendations. The Railway Board presented a memorandum to the Commission and some of the railway officials gave oral evidence. The Railway Amendment Act of 1930 was passed at a time while the Commission was recording evidence and the rules and supplementary instructions framed under Section 71-E (described in Section 6) were issued by the Railway Board before the Commission finished its labours. The Commission reviewed the position of Railway Labour in Chapters IX and X of its report.

The Commission examined the methods of recruitment and recommended that :—

"Registers should be kept of all workers appointed to the engineering department, appointments, and dismissals being reported for entry The registers should be examined regularly by administrative and personnel officers Similar procedure should be adopted for the transportation and commercial departments"

The Railway Board had issued new rules for giving educational grants to the parents in 1930 and they had appointed an educational officer to review the whole position *(Vide* Section 7). The Commission recommended " that the existing educational facilities for the children of the railway employees should continue until such time as suitable alternative provision is made on the recommendation of the special officer who is placed on special duty to study and report on the problem."

Complaints were made about the delay in dealing with applications and of difficulty in obtaining leave. The Commission recommended :—

"The Administration should endeavour to maintain leave reserves adequate to meet requirements spread over the year"

It noted with surprise that only 31 per cent of railway employees actually subscribed to provident funds and no provision

was made for the workers drawing Rs. 15 p.m. to join any of the provident funds and it recommended :—

"After 12 months' continuous service, all employees should be monthly rated and as soon as possible made eligible for all service privileges.

On completion of one year's continuous service, all employees should be eligible to join a provident fund, membership being optional for those drawing under Rs. 20 The limitation on the grant of retiring gratuity to subordinates retiring after 15 years' qualifying service should be modified to permit of voluntary withdrawal from the service subject only to adequate notice"

It discussed the question of deduction from wages of Railway employees under the name of 'debits' : In one railway administration 40,648 debits of the total value of Rs. 2,60,578 were raised on account of under-charges during the first half of the year 1929. In most cases the staff obtains the recoupment from merchants. The Commission condemned the system of recovery of under-charges and recoupment and it recommended :—

"In regard to debits, an effort should be made to arrive at the root cause of the trouble and to see how far it is due to faults in rating and routing methods and how far to inefficiency on the part of the staff" (1*)

The Railway Board had fixed hours of work in their workshops and collieries according to the Factories Act. In Railway Workshops the normal period of employment was 48 hours in a week of five and a half days. Overtime was paid at a flat rate up to 60 hours per week and, thereafter at a 25 per cent higher rate. The Commission examined the provisions of the Railway Amendment Act of 1930 and the rules and subsequent instructions issued thereunder (Section 5). It recommended : —

(*a*) Special efforts should be made to put into operation as soon as possible the regulations devised to give effect to the Washington and Geneva Conventions in the case of railway employees.

(*b*) It should be possible after consultation with the workers to arrive at an understanding regarding the general lines of classification of " essentially intermittent workers ".

(*c*) The Railway Board should reconsider the practicability of reducing the hours for intermittent workers and of giving days of absence at reasonable intervals where weekly rest days cannot be given.

The Commission did not attempt to define " essentially intermittent labour " and unfortunately left its classification to the goodwill of workers and of the railway officers.

(*1) Foot-note :- The simplification of the Tariff and its uniformity on all railways is the most effective method to remove the evil (*Vide* Ch VII).

It discussed the question of security of service and punishment. An employee having been confirmed after 12 months' continuous service, when charged with an offence punishable by discharge or dismissal, should be furnished with a charge-sheet setting out particulars of allegations against him and should be given an opportunity to represent his case in the company of a representative of the Union or one of his fellowmen. It further laid stress that orders for discharge should be passed by Divisional Superintendents and an appeal should lie to the Agents. It never contemplated the present practice of passing discharge orders after consulting appellate authority. It recommended :—

"The power of terminating service should reside solely in the district or divisional officers or officers superior to them Appeals against discharge or dismissal should lie to the Head of the Department or Divisional Superintendent with final appeal to the Agent except where dismissal involves loss of provident fund bonus when further appeal should lie to the Railway Board Facilities for representation on appeal should be the same as at the first hearing

In the Commercial Department it is particularly inadvisable that station masters or other railway officers should be given contracts for loading and unloading goods or for the supply of porters. Equally unsatisfactory is the system of employing contractors as cashiers and of allowing them and their pay clerks to take the place of departmental staff in paying wages to workers. The present practice about coolie consracts has repeatedly been criticised in the meetings of the Legislature, but on account of the vested interests no action has been taken by Railway administration.

As regards the recognition of Railway Unions, the Commission recommended :—

"A more generous policy in respect of recognition of trade unions is desirable A stage has been reached in the development of some unions where facilities might with advantage be conceded

"We feel it is wrong in principle for the Railway Member of the Government of India or the Railway Board which represents the Government to enter into direct discussion of working conditions with representatives of the workers until the Agents responsible for the running of the railways have had an opportunity of a Round Table Conference with these representatives"

It further recommended the establishment of a Joint Standing Machinery in the following terms :—

"A Joint Standing Central Board, containing representatives of the Agents and workers in equal proportions elected by the Indian Railway Conference Association and the All-India Railwaymen's Federation, respectively, charged with the consideration and, when possible, settlement of :—

(i) general questions common to all railways,

(ii) matters common to one or more grades where agreement has not been reached in Railway Council, which would come up automatically, and (iii) references from Railway Council

Failing agreement on the Joint Standing Central Board, if either party desires, the dispute should be referred to a Tribunal of five representatives from either side of the Board and five persons from outside."

The most important recommendation made by the Royal Commission on Indian Labour in connection with Government administration of matters connected with labour was for the setting up of an Industrial Council which would enable representatives of employers, of labour and of Governments to meet regularly in conference to discuss labour measures and labour policy. It was suggested that the Council should meet annually and its president should be elected at each annual session. The Secretary of the Council should be a permanent official responsible to it for the current business throughout the year. The function of the Council would be to examine proposals for labour legislation, to promote a spirit of co-ordination, and to advise the Central and Provincial Governments on the framing of rules and regulations.

SECTION 5.

Labour Legislation.

Though Labour Legislation is of quite recent growth in India, its beginnings go back to the thirties of the nineteenth century when India felt it necessary to regulate the recruitment, forwarding and employment of Indian emigrants under the indenture system. While this legislation applied only to emigration to foreign countries it exerted some influence on the development of labour legislation in India, especially in regard to the labour supply for Assam tea gardens.

The legislation attempted to regulate the work, wages and health conditions of the workers while guaranteeing the employers a stable labour force An outstanding characteristic of the earlier labour laws in India, was that their dominent motive was not so much the protection of labour as the safeguarding of the interests of the employers. Thus, the earlier Assam Labour Acts, the Workmen's Breach of Contract Act of 1859, the Employers and Workmen's (Disputes) Act of 1860, were all intended to safeguard the interests of the employers.

The Assam Labour Acts underwent a series of changes and amendments till the adoption in 1932 of the Tea Districts Emigrant Labour Act.

Factory Legislation.—In the latter half of the last century the cotton industry of Bombay had begun to develop. The factories

were exploiting labour. Hours of labour were inordinately excessive, rates of wages unduly low and other conditions of employment as bad as they possibly could be. The abuses connected with the work of women and children in Indian factories led to the adoption of the Factory Acts of 1881 and 1891. The earlier Act provided that children between the ages of 7 and 12 should work only 9 hours a day and should have 4 hodidays in the month, while the latter limited the work of women to 11 hours and of children to 7 hours per day and protected both classes against night work. The question of regulating the hours of work of adult male labour was raised in 1905 and this led to the adoption of the Indian Factories Act, 1911. This Act limited adult male labour to 12 hours a day, shortened the working day for children, and prohibited the employment of women and children in dangerous processes and during night.

The establishment of the International Labour Organisation in Geneva soon after the Great War and the conventions adopted by the I. L. O. at its first conference at Washington in 1919 (Sec. 2), led the Government of India to creare a Labom Department in 1920, which was placed under the Member of the Viceroy's Council in charge of Industries and Post Offices.

Soon after the establishment of the Department of Labom, the Act of 1911 was amended in 1922 with the object, among others, of giving legislative effect to the International Labom Conventions regarding hours of work, the minimum age for admission of children to employment, the night work of women, and the night work of young persons.

Factory legislation in this country took a further step forward by the adoption of a new Factories Act in 1931 This Act reduced hours of work for adults and children, regulated the hours of work of young persons, considerably amplified and improved the earlier provisions in regard to health and safety of workers and enlarged the powers of inspectors. This Act has been further amended in 1935 and 1936; in the former year for bringing the Indian Law into line with the Night Work (Women) Convention of the International Labour Conference.

The Workman's Compensation Act 1923 provided in Section 3 that if personal injury is caused to a workman by accident arising out of and in the course of his employment, his employer shall be liable to pay compensation in accordance with the provisions of this Chapter. Compensation, according to Section 9, cannot be assigned, attached or charged. Local Governments can appoint commissioners for workman's compensation for local areas with powers of a civil

court, from whose decisions appeals shall lie to the High Court. This Act was limited in respect of both the scope of its application and payment of benefits, but was considerably widened in these directions by the amending Act of 1933.

Trade Unions.—On account of the growth of trade unions and the danger to trade union leaders of prosecution or discharge for conducting strikes, the need for legislation to regulate the scope and activities of trade unions was keenly felt, but it was only in 1926 that such legislation could be adopted. The Trade Unions Act, 1926, with its subsequent amendments, has helped to give trade unions in this country a certain measure of stability and an enhanced sense of responsibility. Sec. 22 prescribes that :—" Not less than one-half of the total number of the officers of every registered Trade Union shall be persons actually engaged or employed in an industry with which the Trade Union is connected.

Trade Disputes .—Up to 1932 there remained on the statute book an Employers and Workmen (Disputes) Act which was passed in 1860. Its main purpose was to secure the settlement of wage disputes, and for this purpose magistrates were empowered to decide such disputes summarily ; it also provided for penal sanctions for breaches of contract by workers. In course of time this law had everywhere become a dead letter, but the appearance of industrial strife on a large scale in the years that followed the Great War led the Bombay Government to consider proposals for the enactment of suitable legislation.

The Government of Bombay, acting on the recommendations of the Provincial Legislative Council, appointed an Industrial Disputes Committee in 1922 under the chairmanship of Sir Stanley Reed, editor-in-chief of the " The Times of India " to consider and report on the practicability or otherwise of creating machinery for the prevention and early settlement of industrial disputes.

The Central Government, however, intervened and adopted the Trade Disputes Act, 1929, which provided for the establishment of courts of enquiry and boards of conciliation. The law made special provisions for illegal strikes and lockouts.

To supplement this Act as far as Bombay was concerned, the Bombay Government passed the Trade Disputes Conciliation Act in 1934 under which a Labour Officer was appointed and the Labour Commissioner was made the Chief Conciliator. A more comprehensive Act (The Bombay Industrial Disputes Act, 1938) makes conciliation proceedings compulsory before resort is had to lockouts ; the Act also attempts to foster the growth of strong and stable Trade Unions.

Legislation regarding Transport Workers.—Legislation relating to conditions of work on transport systems in India is limited to railways, Port services, and Maritime workers. Except in respect of railway workshops, which are covered by the Indian Factories Act, the conditions of work of Indian railway servants were, until recently, wholly determined by administrative decisions of the Railway Authorities. This situation was modified in 1930 in regard to the regulation of hours of work and rest, by the passing of the Indian Railways (Amendment) Act, which seeks to implement the I.L.O. Conventions regarding Hours of Work and Weekly Rest as far as Railways are concerned.

The Railway Act of 1890 was amended by adding a new Chapter VI-A, which provided in Section 71-D. "A railway servant shall be granted, each week commencing on Sunday, a rest of not less than twentyfour consecutive hours."

The Act limited the hours of work to 60. It further created Supervisors of Railway Labour and their duties were prescribed in Art. (71 G) see Section 6.

The Depattment of supervisor of labour was created in the following year (*vide* Section 6).

Mining Legislation.—The first step to regulate mining labour was taken in 1893 with the appointment of a Mining Inspector. The first Mines Act, was adopted in 1901 largely as a result of the Berlin Conference of 1890. This Act, however, concerned itself mainly with the provision of certain safety and sanitary measures. Prompted by the decisions of the International Labour Conference, the Mines Act of 1901 was replaced in 1923 by another which provided for a weekly holiday, limitation of hours of work of adults, and prohibition of the employment, whether below or above ground, of persons under 13 years of age. An Amending Act of 1928 laid down that no person shall be employed in a mine for more than 12 hours a day, and in March, 1929, the Government issued administrative regulations to exclude by stages women from work underground. The Government of India revised these regulations in 1937 and complete exclusion of women from underground work in mines was enforced from 1st October, 1937. Influenced by the Convention adopted by the International Labour Conference in 1931, the Government of India in 1935 amended the Mines Act whereby hours of work in mines were reduced to 54 per week with a 10-hour day above ground and 9-hours day underground and the minimum age of employment was raised from 13 to 15. The Act was further amended in 1936 and 1937 to ensure better safety in mines, and to the same end the Coal Mines Safety (stowing) Act was adopted in 1939.

Provincial legislation in respect of mines has been limited to the Mines Boards of Health Acts, the Bengal Mining Settlement Act of 1912 and the Bihar and Orissa Settlement Act of 1920, and makes provision for sanitary arrangements and housing accommodation in mining areas.

Payment of Wages.—The Payment of Wages Act adopted in 1936 has for its object ensurance of the prompt payment of, and regulation of deduction from wages earned. The Act in the first instance applies to factories and Railways, but local Governments are empowered to extend it to other industries. The Act defined " wages " and made provisions for wage periods which should not exceed one month, for time of payment ; for regulation of deduction as fines ; for absence from duty ; and for recovery of advances. The administration of the Act was included in the responsibilities of the Inspectors of factories.

The Government of India Act of 1935, included 'Labour' in the concurrent list. The Provincial and Central Legislatures are empowered to enact for the control of labour.

During the period 1937 to date several provincial labour enactments have been adopted, as for example, the Industrial Disputes Act (1938), the Rent Restriction Act, and the Shops and Establishments Act, 1939, of Bombay ; the Maternity Benefit, Amendment) Act, 1939, of Madras ; the Maternity Benefit Acts of U. P. (1938), and Bengal (1939), the Rent Restriction Act, and the Maternity Benefit Amendment Act, 1939, of Sind , and the Collection of Statistics Act, and Factories (Amendment) Act, 1939, of the Central Provinces.

There are ample indications that, unless the present legislative activity of the Provinces is co-ordinated and harmonised, there will soon be set up in British India the same divergent labour standards and conditions as now exist between British India and Indian States. This aspect of the problem has already begun to engage the attention of the authorities and a conference of provincial labour authorities was held on 22nd January, 1940, at which these and other subjects received due consideration. [1]

Ever since the publication of the Report of the Royal Commission on Labour, the Railway Board has been making efforts to give effect to its recommendations on Railway Labour. The action taken by the Railway Board each year is referred to in the Administration Report.

For a fuller account of the history of Indian labour legislation, reference may be made to : (1) Chapter III, " Industrial Labour

in India " published in 1938 by the Internation Labour Office, Geneva ; (2) " Indian Labour Legislation, 1911-1935," an article contributed by Mr. N. M. Joshi to the October 1935 issue of the Asiatic Review, London ; and (3) the section on " Labour in India" (pages 507 to 588) in the Indian Year Book, 1939-40, pulished by the Times of India, Bombay.

SECTION 6.

Supervisor of Labour.

In pursuance of the provisions of Railway Amendment Act of 1930, the Government of India appointed a Supervisor of Railway Labour whose duties are :—

(*a*) to inspect railways in order to determine if the provisions of this Chapter and of the rules made thereunder are duly observed and,

(*b*) Such other duties as the Governor General in Council may prescribe.

(*c*) A supervisor of Railway Labour shall be deemed to be an Inspector for the purposes of Sections 5 and 6.

They also framed Rules, under Section 71-E and issued Supplementary Instructions presumably under the same section.

The Railway Board in its supplementary instructions attempted to define the " Essentially Intermittent" worker, which phrase occurs in Art. 6 of the Washington Convention.

The work of a railway servant shall not be regarded as essentially intermittent unless his daily period of duty includes (*a*) two or more periods of inaction of not less than half an hour each, aggregating not less than two hours in all, or (*b*) periods of inaction aggregating not less than four and a half hours.

The difinition is very wide and clause (*a*) takes away the benefit afforded under the Washington Convention. It is desirable to define the meaning of the phrase " essentially intermittent" in the Act itself, and its scope should not be restricted by rules and regulations, nor should it be left to the good will of the workers and Railway Officers, as suggested by Royal Commission on Labour.

The Supervisor of Railway Labour is not now under the Railway Department, but he is directly under the Department of Labour. He has a staff of Inspectors who tour the lines and examine whether

the provisions contained in various Labour enactments about hours of work, periods of rest, and payment of wages are observed by Railway administrations. The Supervisor submits an annual report to the Labour Department, and his powers are somewhat similar to those of Factory Inspectors.

In pursuance of the provisions contained in the Trade Disputes Act, the Government of India in November 1937 announced the decision to set up an additional machinery for the prevention of disputes on Railways which consisted of the appointment of a Conciliation Officer and of an Industrial Advisory Board. The resolution of the Government of India stated :—

(*i*) that a Conciliation Officer would be appointed with headquarters at Calcutta whose duties were to establish contact with the administrations of the railways with which he was concerned, with recognised Unions catering for the employees of those railways, with area committees, workshop committees, railway councils and any other bodies directly concerned in the relations between the administrations and their employees :

(*ii*) that the Conciliation Officer would be responsible in connection with any actual or threatened trade dispute, for endeavouring to bring the parties to a settlement and at other times to use his good offices to maintain harmonious relations :

(*iii*) after the Conciliation Officer had organised his work the Government of India was to set up an Industrial Board consisting of a Chairman and two members who were to be selected by the Chairman from panels appointed by the Government of India. This Board was to deal with any case referred to it by the Conciliation Officer, the Chairman summoning his colleagues after conducting certain preliminary investigations with a view to find out that justification existed for the calling of the Board. The decision of the Board was to take the form of a Report.

(*iv*) that the Company-managed Railways having their headquarters in Calcutta would be invited to avail themselves of the services of the Conciliation Officer.

The first Conciliation Officer, (Col. R. E. Wagstaff, R. E.) actually took over charge of his duties early in December 1937 and he was mainly engaged in establishing contact with the railway administrations and various other bodies such as recognised Unions.

It has now been decided to combine the duties of the Supervisor of Labour and the Conciliation Officer in one person, who will not be a Railwayman, and who will continue to work under the Department of Labour. It is not known whether the Government of India intend to provide some machinery to give effect to the recommendations and findings of the Supervisor of Labour or deposit his reports in the Library as academic essays.

SECTION 7.

Staff Welfare.

Staff Benefit Fund.—The funds for the benefit of the staff were systematised after the War and all fines realised from the staff were credited to the fund. With the approval of the Government of India, it was decided to introduce staff benefit funds on the State-managed railways with effect from the 1st April, 1931. Under the rules governing it the fund is credited, in addition to fines and forfeited provident fund, bonuses of subordinate staff, with a contribution from the revenues of the railway, equal to raise the total receipts to an amount calculated at the rate of one rupee per head of the number of the staff of the railway. It is administered by a Committee consisting of five members, all Railway employees, one nominated by the Agent and four elected by the staff, and presided over by a senior officer nominated by the Agent. The Committee has power to expend money from the Fund on objects connected with the education of the staff and their children, on Institutes, and other forms of recreation and amusement for the staff, schemes for sickness or maternity benefits, etc., for the families of the staff, and relief of distress among the members or ex-members of the staff or their families ; provided that no part of the fund shall be used for the direct benefit of any gazetted officer of the railway.

All the Railways have started the fund. The system of fines has largely been discontinued and the funds are now restricted to the contribution of one rupee per head by Railways. In some Railways, the administration committee has branches at the headquarters of districts and divisions to which funds are allocated by the central committee.

Any member of the staff in distress may apply to the committee for relief. The existence of the fund is not well known, although the Railway Board, at the suggestion of the All-India Railwaymens' Federation, advertised it in Railway Journals. No deduction should be made in Railway contribution on account of fines, and the funds should be allocated to each Division and administerted by a divisional sub-committee.

Educational Facilities.—The educational activities of the Railway were originally confined to maintaing railway schools and giving grants-in-aid to non-railway schools attended by children of the European, Anglo-Indian and domiciled communities, the cost being met in equal proportion from railway revenues and from the Fine Fund.

In the year 1911, a Committee of officers of various departments was appointed to report on the improvement of the railway schools and on the establishment of new schools on the hills for the European and Anglo-Indian subordinate staff. Their report resulted in the framing of a scheme, which was published in 1913, for assistance in respect of children of employees below the officers grade, sent as boarders to Hill schools. These schools did not admit Indians and the assistance was, therefore, confined practically to parents of Anglo-Indian and domiciled communities. The Fine Fund was relieved of all the liabilities and educational expenditure was to be met in future entirely from the railway revenues.

The rules governing the grant for assistance were revised in 1930 and the benefit was extended to all employees who were compelled to send their children to boarding schools away from their stations owing to the absence of schools of " requisite standard " at the stations at which they are posted.

The term " requisite standard " was defined in the circular. The assistance was limited to education for the period covered by the primary and middle section including the Junior Cambridge Classes. The amount of assistance was equal to half the fees for board and tuition in the case of employees drawing Rs. 100 or less, and one-third in the case of those getting from Rs. 101 to Rs. 200 and one-fourth if their salaries do not exceed Rs. 300. The maximum amount of assistanee was fixed at Rs. 15 per child and Rs. 40 per parent.

In addition to the financial assistance given to the parents for the education of their children, the State Railways were maintaining 58 schools, 42 for Europeans and 16 for Indians, excluding 16 primary schools in collieries stations.

The distribution of the schools was as follows :—

	Schools for Europeans.		Schools for Indians.
E. B. Railway ...	4	...	...
E. I. Railway ...	21	...	13
G.I.P. Railway ...	12	...	...
N.W. Railway ...	5	...	3
Total. ...	42	...	16

Five of the Schools maintained for Indians by the E. I. Railway were High Schools.

The Railway Schools for Indians contain about 30 per cent, non-railway children. The question arose whether the Railway Schools may be handed over to Local Governments, as the responsibility of educating children, which include the children of railway employees, rests with the Provinces. The Government of India, after consulting the Local Governments, decided in 1930 that the railways should continue to control and maintain their existing schools and their transfer to local Governments, will be given effect to only in individual cases. The expenditure on Indian Railway Schools was distributed in the following proportion :—

Railway Grant	...	40 per cent.
Government	...	26 „ „
Grant Fees	...	30 „ „
Other sources	...	4 „ „
	...	———
Total ...		100

The Railway Board was anxious to find out its financial responsibility for the educational grant to parents and for the maintenance of railway schools. The Board, on 3rd January, 1931, appointed Mr. W. E. Smith, an officer in the Indian Educational Service (1) to frame estimates of the amount of assistance given to the parents for the education of their children according to the new rules issued in 1930 and (2) to make recommendations for the introduction of improvements in the existing-methods of administration of Railway Schools maintained by the State managed railways. The estimates of costs were to be prepared for assistance to European and Anglo-Indian employees and for assistance to Indian employees.

Mr. Smith submitted his report in 1932 and a supplementary report at the end of the same year. The enquiry of Mr. Smith was mainly directed to Eastern Bengal Railway. He found that on the Eastern Bengal Railway, the number of subordinates (excluding inferior services) was 9,604 of whom 5,313 had no children. The remaining 4,291 had 8,789 children of school going age

between 6 to 16. The distribution was as follows :—

COMMUNITY.	TOTAL EMPLOYEES.	TOTAL CHILDREN.
Hindus ...	7,049 ...	7,152
Muslims ...	1,745 ...	963
Indian Christians ...	48 ...	44
Anglo-Indians & ...		
Domiciled European ...	754 ...	609
Others	8 ...	21
Total ..	9,604	8,789

The number of boys was 5,734 and the number of the girls 3,035.

The cost of parental education according to the old rules was Rs. 60,000, and according to the new rules of 1930, would be 21,670, and it would rise to Rs. 48,180 if assistance is given up to and including the High School stage with an over-riding maximum of Rs. 20, (p. 31 of the Report).

With reference to the rules framed in 1930, Mr. Smith suggested the following modifications :—

1 Assistance will not be given in respect of a child enrolled at a school which is not recognised by the Education Department or Educational authority in whose jurisdiction the school is situated

2. Assistance in respect of a child shall cease when he attains his seventeenth birthday

Mr. Smith discussed the relative cost of the maintenance of schools and parental educational assistance. He recommended that the schools having poor enrolment should be closed down. He said :—

' The maintenance of an existing school is no doubt a moral obligation on the railway so long as its numbers are sufficiently large to justify the title of 'school'. But I would suggest that, when the enrolment in the case of any one school has been below 10 for two years in succession, the maintenance of the institution may be recommended to the good offices of the Staff Benefit Fund Committee as a work of supererogation not debitable to railway revenues."

He examined the cost of maintenance of European Schools having more than 10 children and his calculation showed that it would cost less to continue to maintain these schools than to close them and give parental educational assistance. In the case of Indian High Schools his conclusion was that it would not be worth while to establish a school for Indians unless there were sufficient boys at the station for a High School of 250 at least (Report p. 73).

As regards the management of Railway Schools, Mr. Smith made the following suggestions :—

(*a*) The number of members of the Committee of Management including ex-officio Members be stated.

(*b*) Each Committee be empowered to co-opt one women as member

(*c*) Powers of the Committee be defined *i e*, that the committee be entrusted with the local management and upkeep of the school and its equipment and be empowered to fix the pay of the teachers and other members of the staff and to appoint and dismiss them. The Agents may fix the fees.

(*d*) The frequency of meetings should be stated

(*e*) Particulars regarding quorum, chairmanship, voting, the keeping of minutes be laid down in the rules".

Railway grants to non-railway schools.—Railway grants-in-aid to non-railway schools apparently date from the earliest years when the railways were managed by the Government. Originally they were paid from the Fine Fund but from the 1st July, 1898, half the charges were met from railway revenues. From 1913 the grants, as well as the grants to railway-maintained schools, have been met wholly from revenue.

In the supplementary report, Mr. Smith discussed the nature of the grants and the rules governing the grants given to schools attended by Railway children. These grants were given in lump sums and in some cases these were given for each child at varying rates.

My own opinion is that each school should have a Committee of Management consisting of seven members :—

(1) The Divisional Superintendent of the circle in which the school is situated (*ex-officio* president).

(2) The Head Master of the School (*ex-officio* secretary).

(3) The Inspector of Schools concerned (*ex-officio* member).

(4) A person nominated by the Staff Benefit Fund Committee.

(5,6,7) Three persons to be nominated by the General Manager, one of whom should be a woman, and one at least an educationist not in the railway service.

The meetings should be held twice a year. Special meetings may be held in an emergent case. The teachers should be recruited by the Committee of Management after advertising the post. Teaching staff should form a service and may be transferred from one school to the other, and they should enjoy all the concessions and benefits given to other railway servants. The budget should be prepared by the Committee and submitted to the General Manager for approval. The quorum of the Committee should be three.

The grants-in-aid to non-railway schools should be discontinued. Grants should be given to parents and not to the schools and the rules for the parental grants should remain in force and they should be widely advertised.

Sports.—The Railways encourage sports and healthy recreations among their employees. The advantages are obvious. Several Railways have first class hockey and football teams which take part in first class tournaments. The atheletic sports are held each year in New Delhi, at the time when the all India Railway Conference Association holds its meetings. These sports are very popular, and they are largely attended by the Railway and other officers of the Government of India and the Members of the Legislature.

SECTION 8.

Railway Unions.

It is a common experience in every country, as was verified by the officers of the International Labour Office whom I interviewed in Geneva in the year 1933, that a well-organized and sensible Union of workers is a great asset to every industrial organization. It is the most effective instrument to avoid strikes and establish good and harmonious relations between employers and employed. But every country has to pass several intermediary stages before an ideal union is established. The process of evolution in some countries has been quick and in others conditions have not been favourable. The formation of a Trade Union is very often the result of a strike, which is the only weapon in the hands of employees, when they are too much pressed by employers. The strike is often engineered by an adventurous politician, who ultimately becomes the boss of the Trade Union. The Trade Unions at this stage are most annoying to the employers who resort to all measures in suppressing the Union. In several countries the formation of such Unions was prohibited under severe legal penalty of fine and imprisonment, but such attempts ultimately failed. In these intermidiary stages the Unions are led by politicians who cannot be dismissed by employers but ultimately when the ideal stage has been reached, all the office holders and members belong to the same category of service.

The experience of other countries has also shown that, during the intermediary stages, the Unions are formed on various principles, political opinion, religious beliefs, social help, grade of work,—but ultimately they all fuse themselves into one common Union.

Even in an advanced country like Germany, there have been three main trade organizations known as :—

(1) *Allgemeinen Deutsche Gewerkschaft Bund* or (A. D. G. B.) which had about 8 million members.

(2) Christian Union whose members are Roman Catholics and it has over one million members.

(3) National Trade Union popularly known as *Hirsch-Duncker-schaft* which had about one quarter million members.

Civil servants have also combined in suitable federations and Unions. The movements of the salaried employees and civil servants develop similarly as those of the manual workers in accordance with various ideals. Here also the Socialistic Christian and Liberal tendencies can be distinguished (International Labour Office publication "Freedom of Association" Vol. III, p. 21.)

Holland supplies the most interesting history of the development of Trade Unions. Repeated attempts were made to stop the formation of Unions under heavy penalties. Severe repressive measures were also adopted to stop strikes, punishment by imprisonment or fines was enforced for attempts made or action taken to prevent work being done in any workshop, to prevent persons coming to or remaining in it before or after certain hours, and in general to prevent, suspend or increase the cost of work. There are at present seven principal Unions and the three most important of them are Netherlands' Federation of Trade Unions having 190,179 members, Roman Catholic Workers Federation having 90,475 members and Netherlands' Federation of Christian Trade Unions having 48,327 members. The other Unions have also been established on political, religious and social principles.

There is no law in the Netherlands regulating Trade Union membership or which lays down any condition of occupation, nationality, or domicile in regard to it. The Trade Unions are thus perfectly free to manage their own internal affairs. There is nothing to prevent their imposing on applicants for membership any conditions that they may consider proper. They act in this matter as they think fit. Some of them certainly have their own rules or by-laws laying down definite qualifications for admission or conditions governing exclusion. In general, applicants have to come before the executive committee which decides whether or not to admit them. The Courts have never had to intervene in this matter, nor in the still more burning question of demarcation which has often given rise to disputes between rival Trade Unions. In Holland there exists no distinction in the eyes of the law between a Trade Union and a society having for its object the provisions of recreation for its members, the advancement of art or science, political activities or

charity. The recognition of associations by State is only refused, if it is contrary to public peace which is defined in Section (3) of the Act of 22nd April 1885, *i.e.* if the objects of the association are :—

(1) disobedience to or breach of the law of the land or of regulations in accordance therewith.

(2) Attacking or corrupting morals ;

(3) Interfering with the exercise of the rights of any persons whatsoever.

The right to strike is recognised. The generally accepted opinion, both in theoretical discussions and in law courts is that a strike or lockout does not entail breach of contract. But exception is made in the case of civil servants and Railwaymen. (Freedom of Association, Vol. II, p. 302.)

In Holland the Socialists called for a strike in factories, and the Christian Union opposed it. The Socialists attempted to boycott the Christian Union, but they were soon reconciled. It may be mentioned here by the way that Catholics in every country in Europe, except England, have their separate Trade Unions. While upholding the doctrine of international Christian movement, they follow patriotic and national principles. These Religious Trade Unions resolutely oppose the preparation of a social revolution and the spirit of class hatred, and fight against any anti-religious tendencies in the Workers' Movement. However the Christian organizations are ready to protect the other definite interests of the working classes in common with other Trade Unions. (*ibid*, p. 224 (2).

In Holland even Communists' Unions are recognised. In England the Jews have a separate Union called Jews Bakers' Union. In Holland they have a separate Union for diamond work. In Poland they were not allowed to become members of the Socialists Union. They organised themselves in a general Union for all the professions. In this Jewish Federation only Jews can become members and it is recognised by the Government.

In Italy and Germany the Unions have all combined under the influence of Mussolini and Hitler. Even the Roman Catholic Unions in Italy have been merged into a General Union, as agreement has been reached between the Pope and Mussolini. The sentiments of Catholic religion have been accepted by Mussolini.

In Holland and Poland there exists a tendency to amalgamate. In Czechoslovakia the most important Union is the Federation of Czechoslovek Trade Unions, but the Communists'

Union, the German Union and the Central Trade Union of Christian workers are also of great importance.

To settle disputes between employers and employees, there exists a court of arbitration with a judge of the High Court as Chairman. In some cases, this body is permanent. They are not whole-time salaried officers but they get honorariam when called on duty.

Recognition of Unions.—This is sometimes understood to mean that the employer recognises the right of the Union to speak on behalf of all his workmen, or at any rate the entire class for which the Union caters. The Royal Commission on labour recommended, that "Recognition should mean that a Union has the right to negotiate with the employer in respect of matters affecting either the common or individual interests of its members. The fact that a union consists only of a minority of employees, or the existence of rival unions are not sufficient grounds for refusing recognition". The Commission further recommended that the Trade Unions Act should be re-examined in not more than three years' time ; all limitations imposed on the activities of registered Unions and their officers and members should be reconsidered so as to ensure that the conditions attached to registration are not such as to prevent any well-conducted *bona-fide* union from applying for registration.

The Government of India issued instructions prohibiting the recognition of Communal Unions. There are three Railway Unions :—

(1) All-India Railwaymen's Federation.

(2) All-India National Railway Union.

(3) All-India Muslim Railway Employees' Association.

The Railway administrations, in compliance with the instructions of the Government of India, have refused the recognition of the last two Unions and the Railway Board recognises the All-India Railwaymen's Federation as the sole spokesman of the Railway employees. The representatives of the All-India Railwaymens' Federation meet the Railway Board twice a year and discuss with them current problems.

The subjects of discussion are published in the Railway Administration Report.

CHAPTER IX.

Statistics.

The study of statisties is necessary for testing the efficiency of the working of railways and comparing the same with other railway System. The statistic in this chapter are taken from *statistique internationale des chemins de fer* 1937, and for Indian Railways from the Administration Report, Vol. II, 1937-38. The statistics in the report of international Union are given in Kilometre. One Kilometre = ·62137 miles. In the international statistics one metric ton = 1000 Kilogrames which are equal to 2204 English lbs., an English ton = 2240 lbs. Difference between metric ton and English ton is very small. We may roughly convert the metric figures into English figures by assuming 8 Kilometre = 5 miles and Metric ton = English ton.

Selection of countries.—In the international statistics, the figures are given for 65 countries, but I have selected the following countries whose general administration, I have outlined in chapter II.

(2) Germany

(4) Belgium

(518-23) Six French Railways.

(24-27) Four British Railways.

(49) Swiss Railways.

(58-59) Two Canadian Railways.

(60) United States Railways.

(64) Indian Railways.

(65) South African Railways.

In the tables I, I have given the length of the lines which include factory lines and station sidings, and the length of the route, in Kilometres. The appreciable difference between the two indicates large sidings for industrial factories. I have also given train Kilometres both goods and passengers.

These figures indicate the size of railways and the use of engines and track.

In the Table II, figures for the volume of traffic are given and they include the number of passengers and the number of passenger kilometres, which is obtained by adding the number of Kilometres each passenger travelled. I have given the percentage of first, second and third class passengers. Intermediate class exists only on Indian Railways, and it is included in the Third Class, but it is indicated separately in Table IV.

In the Table III, I have given the percentage of expenditure under different heads (Table 3-4 of International Union); general management, traffic, way and works, Rolling Stock, traction, and miscellaneous. I have also given in this table operating ratios.

In the Table IV, taken from the Indian Railway Administration Report I have given an idea of relative efficiency of Class I Railways in India. The calculation of the percentage of passengers travelling in various classes is my own.

I kept the number given in the internationa lTables.

TABLE I.

Lengths of Line in Kilometre (one Kilometre = 0·62137 English Miles or 8 Kilometres = 5 Miles).

No. in International tables.	Names of Railways	Length of line in Kilometre.		Train Kilometre in thousand		
		Length of lines including sidings and connecting lines.	Length of route	Passengers	Goods.	Total.
2	Germany	123,949	78,775	530,954	292,153	823,117
4—5	Belgium	13,583	7,682	63,027	28,554	91,581
18—23	Total of six French Railways ...	92,840	75,251	300,653	149,586	450,239
24—27	The of four British Railways ...	81,310	57,262	448,987	219,447	668,434
49	Swiss Railways ..	6,124	3,994	36,152	9,339	45,491
58—59	Total of two Canadian Railways.	89,336	70,390	57,652	84,438	142,090
60	United States	636,711	445,178	670,107	807,387	1,477,494
64	Indian Railways	94,412	75,774	171,910	115,315	287,225
65	South African Railways ...	24,770	21,800	27,748	55,865	83,613

TABLE II.

VOLUME OF TRAFFIC.

No.	Railways.	Total passengers in thousands.	Percentage.			Passengers Kilometre in thousands	Percentage			Goods	
			I class	II class.	III class.		I class	II class	III class	Total Goods tonnage in thousands.	Total ton Kilometre in thousands
2	Germany	1,808,041	0 0	5 2	94 8	50,095,595	0 2	6 2	93 6	499 047	79,757,036
4	Belgium (National Railway) ..	202,440	0 2	6·7	93·1	6,148,156	1·05	10 5	89 0	74,470	6,353,160
5	Belgium (Northern Railway) .	15.533	0 7	8 7	90 6	2,297,694	1·0	13·5	85 5	2 298	498,493
18	French Alsace Lorraine .	59,314	0 2	4 8	95 0	1,642,930	0 8	10 2	89 0	45 846	3,049,729
19	East French Railway	84.097	0·5	7 1	92 4	3,387,111	2·1	12 0	85 9	50,052	7,092,734
20	French State Railway ..	185,986	3 3	19 8	76 5	5,873,001	2 6	19 5	77 9	30,696	3,935,951
21	Northern Railway	124,060	0 5	5 7	93 8	3,969,705	3·1	15 1	81 8	53,869	7,090,780
22	P. L M ...	94.629	0 9	5 8	93·3	7,111,883	3·8	16 5	79 7	39,648	9,637,182
23	Paris and Orleans and Midi Railways	78,327	0·6	6 1	93·3	4,998.708	2 4	11·5	86·1	28 716	5,756,597
24	Great Western Railway U K.	157,760	2·0	..	98·0	4,502,993	4·5		95·5	77,014	5,667,443
25	London and N E. Railway .	307,308	3 7	6 7	89·6	8,091,331	5 4	3 2	91·4	145,875	10,184,928
26	London Midland and Scottish Railway.	459,546	3·2	0 1	96 7	13,042,223	5 9	0·0	94 1	150,094	12,190,304
27	Southern Railway	378,714	4 7	0·1	95 2	8.676,315	7 0	0 8	92 2	18,681	1,282,107
49	Federal Swiss Railway ..	111,988	0 2	3·6	96 2	2 859,203	0 7	9 0	90 3	15,958	2,013,686
580	National and Pacific Canadian	18,709	...	..	...	2,864,370	...	...	...	82,084	43,673,486
59	Railways.										
60	U S American Railways ..	497,288	..	.	..	39,679,122	..	..	..	1,828,745	575,561,475
64	Indian Railways	503 691	0·1	0 9	99 0	29,216,148	0·5	1 8	97 7	78,864	30,007,577
65	South African Railways ...	89,801	31 3	27·6	41·1	...	.	...	...	28,547	10,651,243

TABLE III.

Percentage of expenditure under various heads and operating ratio.

No	Names of Lines.	Percentage of expenditure on General Management (8)	Percentage on operation & Traffic.	Percentage on Ways & Works.	Percentage on rolling Stock	Percentage on Traction	Percentage on Miscellaneous	Total	Operating Ratio
2	Germany ..	.	36 2	30 7	16 7	16 4	..	100	90 60
4	Belgium National Railways ...	17·6	19 7	11 4	7 3	27·7	16 3	100	98 63
5	Belgium Northern Railways ...	16 0	28·0	13 4	20 6	21 1	0 9	100	77 19
18	Chemins de Fer de Loraine .	13 6	28 8	17 4	20 7	18 0	1 5	100	115 36
19	Chemins de Fer de l'Est ...	9 6	28 0	20 4	11 6	28 9	1 5	100	112 57
20	French State Railways .	10 5	26 5	17·7	21 2	23 6	0 5	100	136 81
21	Northern Railways .	8 5	29 3	18 2	22·8	20 2	1 0	100	111 38
22	P L M. .	9 7	28 6	18 7	20 3	21 7	1 0	100	114 62
23	Midi ...	11 4	31 5	19·6	19 7	17·1	0 7	100	108 64
24	Great Western Railway .	4 7	35·0	14·9	15 8	24 5	5 1	100	77·52
25	London and N E Railway	3 3	33 3	13 6	21·4	25 3	3 1	100	80 55
26	London Midland & Scottish Railway	4 4	36 0	14 1	16·6	25·1	3 8	100	79 72
27	Southern Railway ...	4 4	30·6	20 5	14 6	25 3	4 6	100	77 98
49	Federal Swiss Railways ..	2 7	33·9	16 6	12 3	22·7	11 8	100	66 40
59	National Canadian Railway ..	4·6	50 8	19 5	24 6	..	0 5	100	91 12
60	American Railways ..	4 7	51 8	15 9	26 5	..	1 1	100	74 87
64	Indian Railways ..	7 8	16·8	14·3	9 8	26 1	25·2	100	66 25 ·1
65	South African Railways ..	2 7	29·2	20 0	24 9	20 7	2 5	100	65 42

(1) It is operating ratio with depreciation True operating ratio in 60 26 (See Ch IV, Sec 6)

TABLE IV.

Comparison of traffic & operating ratios of First Class Railways in India.

Name of Railways	Total in thousands	PASSENGERS CARRIED. Percentage.				Total in thousands	PASSENGER MILES Percentage.				Goods ton miles in thousands	Operating Ratio
		1st Class	2nd Class	Inter Class	3rd Class		1st Class	2nd Class	Inter Class	3rd Class		
B. N Railway ...	17,557	1	·6	8·7	90 6	847,078	7	2·1	7 4	89 8	3,207,563	68 90
B B & C I. Railway ..	64,287	1	2·4	1	97 4	1,256,165	8	3 3	1 8	94 1	1 159,095	59 88
E B. Railway ..	32,593	·1	9	7 4	91 6	766,354	6	1 6	6 6	91·2	531,445	84 70
E I. Railway ..	61,484	1	6	5·5	93 8	3,479,566	4	1 6	5 6	92 4	6,833,389	60 14
G I P Railway .	53,122	10	1 4	3	98 2	1,844,690	·9	2 6	1 4	95·1	2 896,815	66 57
M S M. Railway .	18,288	1	8	2 2	97·1	733,500	6	2 6	2 7	94 1	927,380	62 80
N. W Railway ..	68,186	07	·4	2 5	97·03	3,052,572	4	1 6	3 5	94 5	3,070,349	70 0
S I Railway ..	14,074	1	·8	.	99 1	353,449	4	2 9	.	96 7	243,175	71 51
A B. Railway ...	13,247	3	0	2 7	97 0	379,920	·7	05	4 2	95 05	271,126	86·48
B N W Railway .	32,486	·1	·3	1 2	98 4	1,229,123	·1	6	2	97 3	685,409	47 71
B B. & C I Metre Gauge ..	23,720	1	8	·1	99 0	982,972	·2	1 2	1	98 5	786,611	55 06
H E. H. Nizam State Railway ...	86 512	·1	8	05	99 05	178,093	3	1·9	2	97 6	364 584	42 75